



0000125038

Transcript Exhibit(s)

Docket #(s): E-01933A-10-0340

Arizona Corporation Commission
DOCKETED

MAY 4 2011

DOCKETED BY 

Exhibit #: A1-A2, TEP1, TEP2, TEP4-TEP9.

AZ CORP COMMISSION
DOCKET CONTROL

2011 MAY -4 P 2: 53

RECEIVED



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Marta T. Hetzer
Administrator/Owner

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2200 North Central Avenue
Phoenix, AZ 85004-1481
MAIN (602) 274-9944
FAX (602) 277-4264

To: Docket Control

Date: May 4, 2011

Re: TEP Complaint by Polivka
E-01933A-10-0340
Volumes I and II, Concluded
March 3 and April 19, 2011

STATUS OF ORIGINAL EXHIBITS

FILED WITH DOCKET CONTROL

Complainant (A Exhibits)

1 and 2

Tucson Electric Power (TEP Exhibits)

1, 2, 4 through 9

EXHIBITS RETURNED TO PARTIES

Tucson Electric Power (TEP Exhibits)

3 Not utilized

Copy to: Belinda A. Martin, ALJ
Melody Gilkey, Esq. – TEP (with return of Exhibit TEP-3)
Jason D. Gellman, Esq. – TEP
Viktor Polivka, Complainant

tabbies
EXHIBIT
A 1
ADMITTED

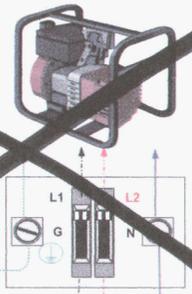
INSTALLATION 1875 S. HALLS WAD RD. #82

3) CONTROLLERS (3RD CONTROLLER NOT USED FOR FUTURE EXP.)

xantrex™

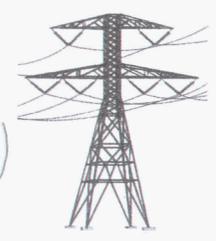
~~NOT USED~~

~~AC Generator~~

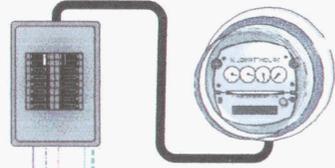


Main AC Distribution Panel

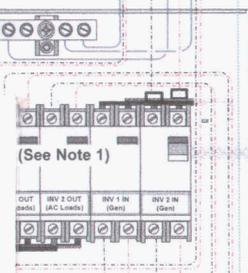
Utility Grid



Generator Disconnect

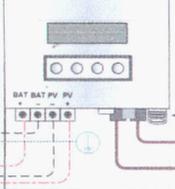
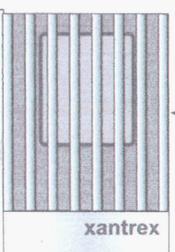


Panel



XW Solar Charge Controller

Inverter AC Distribution Panel



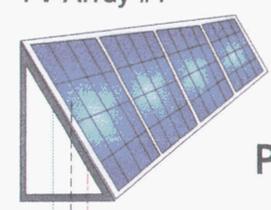
Xanbus Network Terminator



Renewable Energy (RE)

PV Array #1

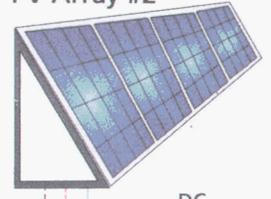
NOTE: 22° @



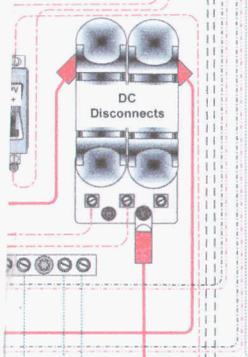
Photovoltaic

DC Combiner Box

PV Array #2



DC Combiner Box



XW Solar Charge Controller

Grounding Conductor

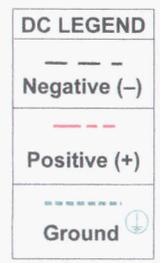
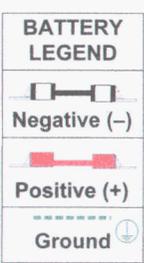
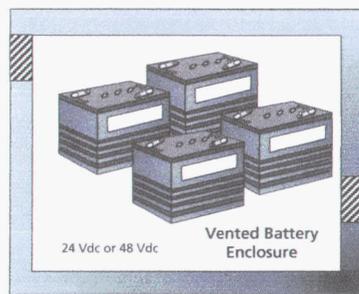
Communication Cable (Category 5)

Battery System Bonding Wire

BTS Communication Cable

Battery Temperature Sensor (BTS)

Battery Bank



XW Series Power System

NOTE: POLIUKA
(3) INVERTERS (C)

TRIPLE

Dual-Inverter System with Renewable Energy (Solar)

XW CONFIG. (CABLE)
LAPTOP BASED
CONTROL

IMPORTANT:

All configurations must comply with local and national electrical code jurisdiction. Consult your local certified installer or local electrical authority to ensure compliance. Actual wiring requirements may vary.

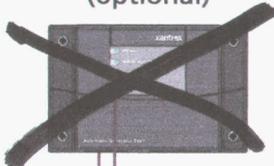
| AC LEGEND | |
|-----------|---------|
| | Neutral |
| | HOT L1 |
| | HOT L2 |
| | Ground |

XW System Control Panel



Xanbus Network Terminator

XW Automatic Generator Start (optional)

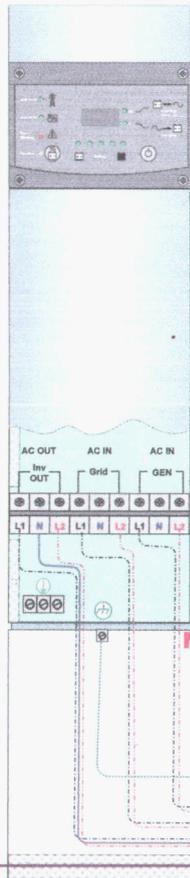


Communication Cable (Category 5)

Communication Cable (Category 5)

INV 2

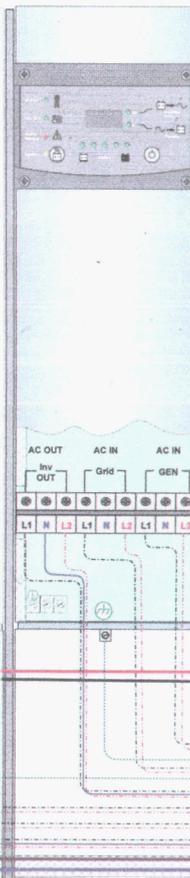
xantrex



Hybrid Inverter/Charger

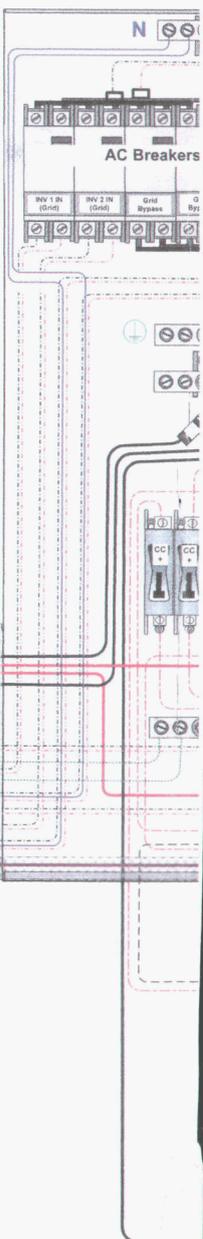
INV 1

xantrex



Hybrid Inverter/Charger

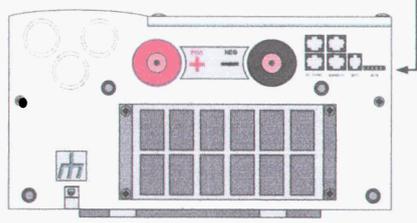
XW Power Distribution



AC Sync Cable

Communication Cable (Category 5)

XW Inverter/Charger Communication Ports (on Bottom of Inverter)



Note 1: If no Grid is available, the generator can be connected to the AC breakers in the XW Power Distribution Panel, instead of to a separate AC breaker.



A UniSource Energy Company

Account: [REDACTED]
 Bill Date: 3-08-2011
 Customer Name: POLIVKA, VIKTOR P
 Service Address: [REDACTED]
 TUCSON AZ 85730-4537

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 7.96 | 7.96 | 7.96 | 7.96 |

| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 3-21-2011 | \$7.96 |

Payment: \$7.96 on 02/09/2011 - Thank You!

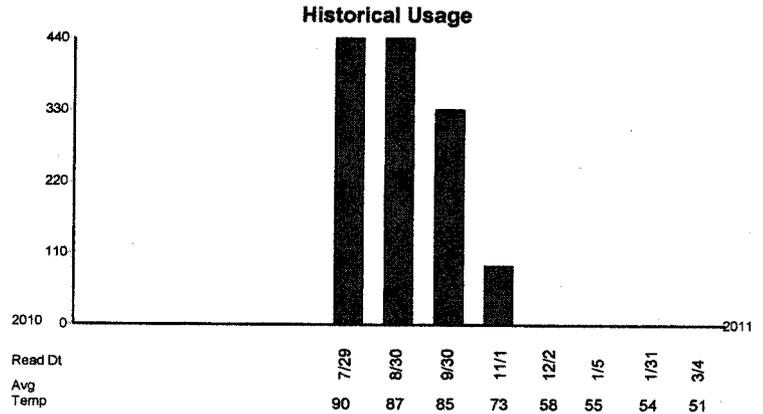
TEP filed an energy-efficiency implementation plan with the Arizona Corporation Commission on January 31, 2011. A copy of the plan is available online at www.tep.com/eeplan

R-01 - Residential (Service No. 4110417234)

Electric Charges for Period 02-01 - 03-04

| | |
|------------------------------|------|
| DELIVERY SERVICES | |
| Customer Charge | 7.00 |
| POWER SUPPLY CHARGES | |
| PPFAC - kWh 0 @ \$0.00 | |
| GREEN ENERGY CHARGES | |
| TAXES AND ASSESSMENTS | |
| ACC Assessment | 0.02 |
| City Franchise Fee | 0.16 |
| State Sales Tax | 0.48 |
| County Sales Tax | 0.04 |
| City Sales Tax | 0.14 |
| City Public Utility Tax | 0.12 |

Total Electric Service Charges 7.96



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|---------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| SK2-145 | KWH | 4-04 | 3-04 | 1-31 | 32 | 0 | 0 | 0 | 1 | 0 |
| SK2-145 | KBH | 4-04 | 3-04 | 1-31 | 32 | 0 | 0 | 0 | 1 | 0 |

NOTE: VBT ADVISED TEP BILL - ZERO -
 AFTER CURSIN RE METEL 3' 7' 14' 89 -
 NOT FOR THE STATE OF AZ, A CONDITION
 THAT WILL REMAIN UNTIL THE SYSTEM CHANGES
 TO SUP SUPPLY (ABOUT 35%) TO STABLE PER
 9 10K ON IT

Para asistencia en Español, el número de teléfono se encuentra al reverso de esta pagina.



Account: [REDACTED]
 Bill Date: 2-04-2011
 Customer Name: POLIVKA, VIKTOR P
 Service Address: [REDACTED]
 TUCSON AZ 85730-4537

3/11/2011 - 3/16/2011

\$ 169.16
TOTAL

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 7.96 | 7.96 | 7.96 | 7.96 |

| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 2-16-2011 | \$7.96 |

11 ÷ 169.16
00.67

Payment: \$7.96 on 01/12/2011 - Thank You!

R-01 - Residential (Service No. 4110417234)

Electric Charges for Period 01-06 - 01-31

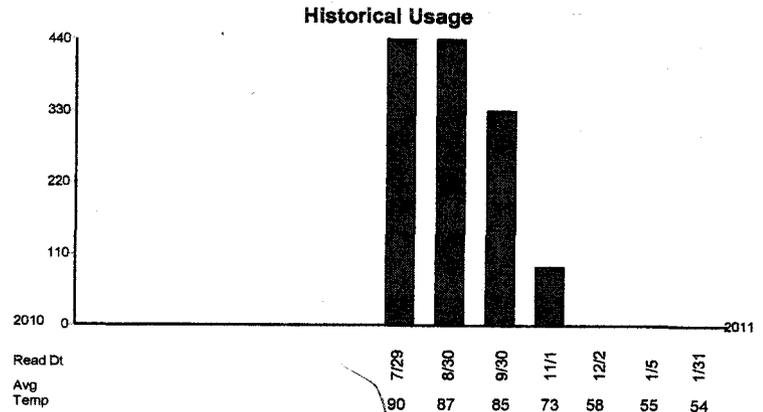
DELIVERY SERVICES
 Customer Charge 7.00

POWER SUPPLY CHARGES
 PPFAC - kWh 0 @ \$0.00

GREEN ENERGY CHARGES

TAXES AND ASSESSMENTS
 ACC Assessment 0.02
 City Franchise Fee 0.16
 State Sales Tax 0.48
 County Sales Tax 0.04
 City Sales Tax 0.14
 City Public Utility Tax 0.12

Total Electric Service Charges 7.96



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-------------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 2-03 | 1-25 | 1-05 | 20 | 8260 | 8260 | 0 | 10 | 0 |
| AMRS-159280 | KWH | 2-03 | 1-31 | 1-25 | 6 | 0 | 0 | 0 | 1 | 0 |
| SK2-145 | KWH | 2-03 | 1-31 | 1-31 | 0 | 0 | 0 | 0 | 1 | 0 |
| SK2-145 | KBH | 2-03 | 1-31 | 1-31 | 0 | 0 | 0 | 0 | 1 | 0 |

NOTE: TEP CANE NO METER IF ASSIGNED METER IS
 02/07/11 @ 7:55 AM GIOVANA (TMA 888-3657) METER
 02/02/11 TMA CANE PER VOLO WLF REC 02/11/11 @ 1:30
 520-623-7711 call rec 02/02/11
 call customer EXT 092 NO
 VERIFY W/ RATE!!!



Account: [REDACTED]
 Bill Date: 1-07-2011
 Customer Name: POLIVKA, VIKTOR P
 Service Address: [REDACTED]
 TUCSON AZ 85730-4537

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 7.96 | 7.96 | 7.96 | 7.96 |

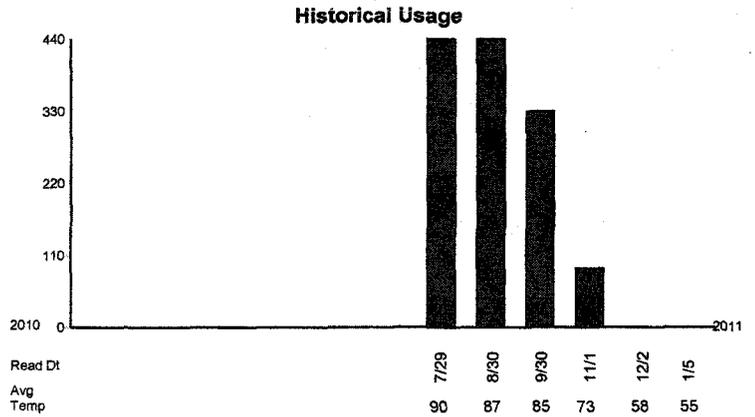
| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 1-19-2011 | \$7.96 |

Payment: \$7.96 on 12/09/2010 - Thank You!

R-01 - Residential (Service No. 4110417234)

Electric Charges for Period 12-03 - 01-05

| | |
|------------------------------|------|
| DELIVERY SERVICES | |
| Customer Charge | 7.00 |
| POWER SUPPLY CHARGES | |
| PPFAC - kWh 0 @ \$0.00 | |
| GREEN ENERGY CHARGES | |
| TAXES AND ASSESSMENTS | |
| ACC Assessment | 0.02 |
| City Franchise Fee | 0.16 |
| State Sales Tax | 0.48 |
| County Sales Tax | 0.04 |
| City Sales Tax | 0.14 |
| City Public Utility Tax | 0.12 |



Total Electric Service Charges 7.96

| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 2-03 | 1-05 | 12-02 | 34 | 8260 | 8260 | 0 | 10 | 0 |

NOTE: ^{was} ~~first~~ ZERO electricity used in home - snow only



Account: [REDACTED]
 Bill Date: 12-06-2010
 Customer Name: POLIVKA, VIKTOR P
 Service Address: [REDACTED]
 TUCSON AZ 85730-4537

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 17.16 | 17.16 | 7.96 | 7.96 |

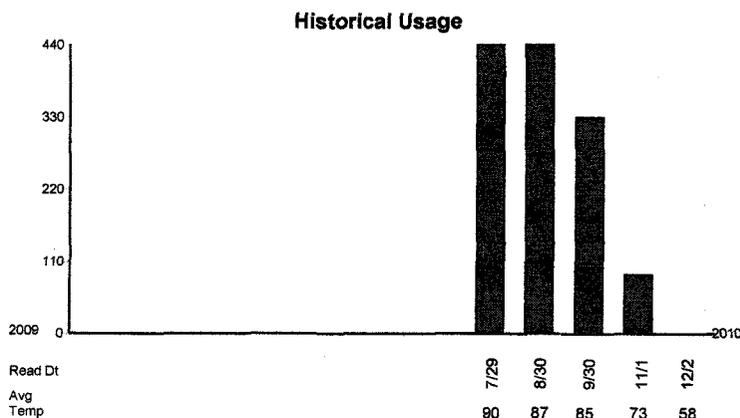
| DUE DATE | AMOUNT DUE |
|------------|------------|
| 12-16-2010 | \$7.96 |

Payment: \$17.16 on 11/09/2010 - Thank You!

R-01 - Residential (Service No. 4110417234)

Electric Charges for Period 11-02 - 12-02

| | |
|---------------------------------------|-------------|
| DELIVERY SERVICES | |
| Customer Charge | 7.00 |
| POWER SUPPLY CHARGES | |
| PPFAC - kWh 0 @ \$0.00 | |
| GREEN ENERGY CHARGES | |
| TAXES AND ASSESSMENTS | |
| ACC Assessment | 0.02 |
| City Franchise Fee | 0.16 |
| State Sales Tax | 0.48 |
| County Sales Tax | 0.04 |
| City Sales Tax | 0.14 |
| City Public Utility Tax | 0.12 |
| Total Electric Service Charges | 7.96 |



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 1-05 | 12-02 | 11-01 | 31 | 8260 | 8260 | 0 | 10 | 0 |

NOTE: Electric Bill - NO ELECTRIC CONSUMPTION USED - ZERO



A UniSource Energy Company

Account: XXXXXXXXXX
 Bill Date: 11-03-2010
 Customer Name: POLIVKA, VIKTOR P
 Service Address: XXXXXXXXXXXXXXXXXXXX
 TUCSON AZ 85730-4537

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 41.75 | 41.75 | 17.16 | 17.16 |

| DUE DATE | AMOUNT DUE |
|------------|------------|
| 11-15-2010 | \$17.16 |

Payment: \$41.75 on 10/08/2010 - Thank You!

R-01 - Residential (Service No. 4110417234)

Electric Charges for Period 10-01 - 11-01

DELIVERY SERVICES

Customer Charge 7.00
 Summer - 1st 500 kWh 87 @ \$0.046925 4.08
 Winter - 1st 500 kWh 3 @ \$0.047309 0.14

POWER SUPPLY CHARGES

Summer - kWh 87 @ \$0.033198 2.89
 Winter - kWh 3 @ \$0.025698 0.08
 PPFAC - kWh 90 @ \$0.00

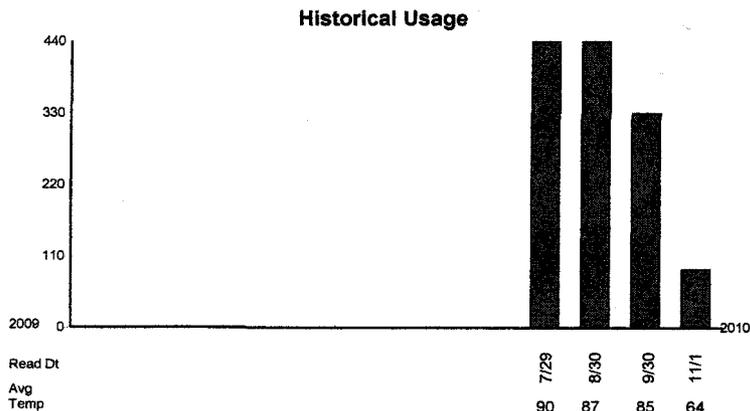
GREEN ENERGY CHARGES

Renewable Energy Standard Tariff 0.78
 DSM Surcharge - kWh 90 @ \$0.001249 0.11

TAXES AND ASSESSMENTS

ACC Assessment 0.05
 RUCO Assessment 0.01
 City Franchise Fee 0.34
 State Sales Tax 1.04
 County Sales Tax 0.08
 City Sales Tax 0.30
 City Public Utility Tax 0.26

Total Electric Service Charges 17.16



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 12-02 | 11-01 | 9-30 | 32 | 8260 | 8251 | 9 | 10 | 90 |

NOTE: PLEASE REMOVE USING OF SUP
 FOR AC SERVICES AND MAKE A
 FOR SOCIAL SUPPORT



Account: XXXXXXXXXX
 Bill Date: 10-04-2010
 Customer Name: POLIVKA, VIKTOR P
 Service Address: XXXXXXXXXX
 TUCSON AZ 85730-4537

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 52.36 | 52.36 | 41.75 | 41.75 |

| DUE DATE | AMOUNT DUE |
|------------|------------|
| 10-14-2010 | \$41.75 |

Payment: \$52.36 on 09/03/2010 - Thank You!

R-01 - Residential (Service No. 4110417234)

Electric Charges for Period 08-31 - 09-30

DELIVERY SERVICES

Customer Charge 7.00
 Summer - 1st 500 kWh 330 @ \$0.046925 15.49

POWER SUPPLY CHARGES

Summer - kWh 330 @ \$0.033198 10.96
 PPFAC - kWh 330 @ \$0.00

GREEN ENERGY CHARGES

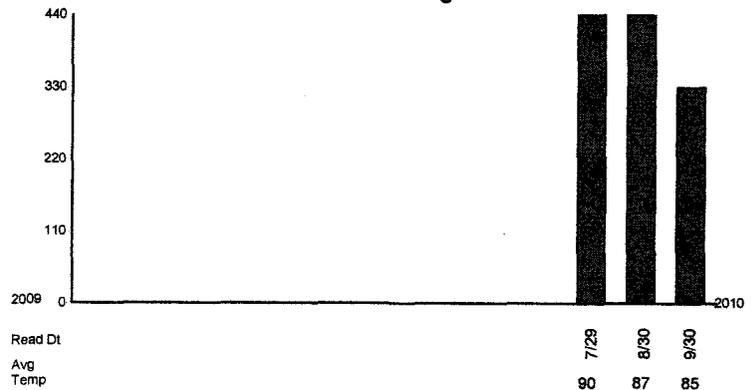
Renewable Energy Standard Tariff 2.85
 DSM Surcharge - kWh 330 @ \$0.001249 0.41

TAXES AND ASSESSMENTS

ACC Assessment 0.12
 RUCO Assessment 0.01
 City Franchise Fee 0.83
 State Sales Tax 2.52
 County Sales Tax 0.19
 City Sales Tax 0.73
 City Public Utility Tax 0.64

Total Electric Service Charges 41.75

Historical Usage



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 11-01 | 9-30 | 8-30 | 31 | 8251 | 8218 | 33 | 10 | 330 |

NO IR GND SUPPOR AC



Account: **4110417234**
 Bill Date: 8-31-2010
 Customer Name: POLIVKA, VIKTOR P
 Service Address: **4675 S. HAYDEN RD. #100**
 TUCSON AZ 85730-4537

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 52.29 | 52.29 | 52.36 | 52.36 |

| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 9-13-2010 | \$52.36 |

Payment: \$52.29 on 08/05/2010 - Thank You!

R-01 - Residential (Service No. 4110417234)

Electric Charges for Period 07-30 - 08-30

DELIVERY SERVICES

Customer Charge 7.00
 Summer - 1st 500 kWh 440 @ \$0.046925 20.65

POWER SUPPLY CHARGES

Summer - kWh 440 @ \$0.033198 14.61
 PPFAC - kWh 440 @ \$0.00

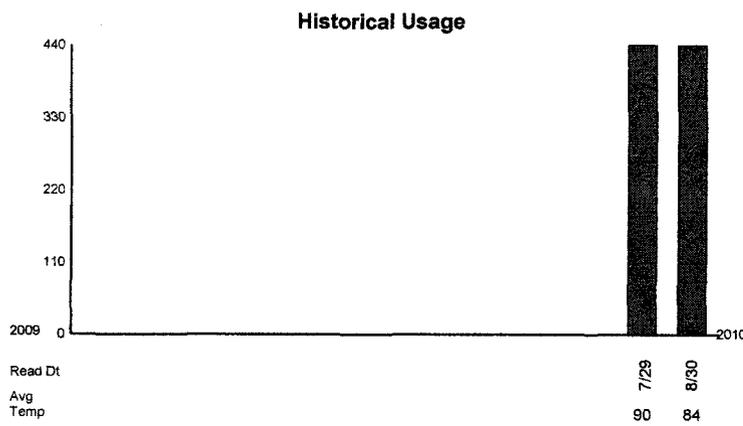
GREEN ENERGY CHARGES

Renewable Energy Standard Tariff 3.20
 DSM Surcharge - kWh 440 @ \$0.001249 0.55

TAXES AND ASSESSMENTS

ACC Assessment 0.15
 RUCO Assessment 0.02
 City Franchise Fee 1.04
 State Sales Tax 3.17
 County Sales Tax 0.24
 City Sales Tax 0.92
 City Public Utility Tax 0.81

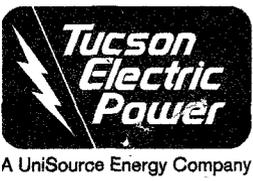
Total Electric Service Charges 52.36



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 9-30 | 8-30 | 7-29 | 32 | 8218 | 8174 | 44 | 10 | 440 |

NOTE: FIRD UPOL FOR AC

007 use x 9000 = 28,000 kWh/yr?



Account: ~~XXXXXXXXXX~~
Bill Date: 7-30-2010
Customer Name: POLIVKA, VIKTOR P
Service Address: ~~XXXXXXXXXXXXXXXXXXXX~~
TUCSON AZ 85730-4537

35

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 28.43 | 28.43 | 52.29 | 52.29 |

| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 8-11-2010 | \$52.29 |

@ net metering this would be \$110.84

Payment: \$28.43 on 07/08/2010 - Thank You!

R-01 - Residential (Service No. 4110417234)

Electric Charges for Period 06-30 - 07-29

| | |
|---------------------------------------|--------------|
| DELIVERY SERVICES | |
| Customer Charge | 7.00 |
| Summer - 1st 500 kWh 440 @ \$0.046925 | 20.65 |
| POWER SUPPLY CHARGES | |
| Summer - kWh 440 @ \$0.033198 | 14.61 |
| PPFAC - kWh 440 @ \$0.00 | |
| GREEN ENERGY CHARGES | |
| Renewable Energy Standard Tariff | 3.20 |
| DSM Surcharge - kWh 440 @ \$0.001249 | 0.55 |
| TAXES AND ASSESSMENTS | |
| ACC Assessment | 0.08 |
| RUCO Assessment | 0.02 |
| City Franchise Fee | 1.04 |
| State Sales Tax | 3.17 |
| County Sales Tax | 0.24 |
| City Sales Tax | 0.92 |
| City Public Utility Tax | 0.81 |
| Total Electric Service Charges | 52.29 |

\$79.2

NOTES:
MODE: BLDSUP/LOADSMD 22/7
AV. TEM 106 F - 7TON AC 24/7
DAILY COST \$1.743
AC SETTING @ 78 F 29/7

| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 8-30 | 7-29 | 6-29 | 30 | 8174 | 8130 | 44 | 10 | 440 |

NOTE: BLDSUP MODE FOR AC



Account: [REDACTED]
 Bill Date: 7-01-2010
 Customer Name: POLIVKA, VIKTOR P
 Service Address: [REDACTED]
 TUCSON AZ 85730-4537

35

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 9.71 | 9.71 | 28.43 | 28.43 |

| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 7-13-2010 | \$28.43 |

Payment: \$9.71 on 04/21/2010 - Thank You!

Effective June 1, 2010, the DSM Surcharge has increased from \$0.000831 to \$0.001249 per KWH, and the Arizona sales tax has increased from 5.6 percent to 6.6 percent.

R-01 - Residential (Service No. 4110417234)

Electric Charges for Period 06-18 - 06-29

DELIVERY SERVICES

Customer Charge 7.00
 Summer - 1st 500 kWh 200 @ \$0.046925 9.39

POWER SUPPLY CHARGES

Summer - kWh 200 @ \$0.033198 6.64
 PPFAC - kWh 200 @ \$0.00

GREEN ENERGY CHARGES

Renewable Energy Standard Tariff 1.73
 DSM Surcharge - kWh 200 @ \$0.001249 0.25

TAXES AND ASSESSMENTS

ACC Assessment 0.05
 RUCO Assessment 0.01
 City Franchise Fee 0.56
 State Sales Tax 1.72
 County Sales Tax 0.14
 City Sales Tax 0.50
 City Public Utility Tax 0.44

Total Electric Service Charges 28.43

| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 7-29 | 6-29 | 6-17 | 12 | 8130 | 8110 | 20 | 10 | 200 |

NOTE: SHITC USING OLD SUPPLY TO ECUCY SUPPLY 4TON AC

No electric bills from TEP for the period of 04/15/2010 thru 06/17/2010 are not available

Since customer was "informed that he needed to DISCONNECT FROM THE GRID so

as the incentive UFI calculations could be initiated -- after TEP Engineer assured him that despite the disconnect, he was still eligible for the Off Grid Incentive for 5040Watt plus at \$2.00 per watt and watts at \$2.00x 70% for installation. Customer was a TARIFF paying customer and at the time his filling his Application for UFI February 22, 2010 .

After being informed by the ACC Analyst, he was informed that the "disconnect

requirement" was indeed illegal, and she then helped him to have his service re

connected, and insisted that TEP could not charge the \$25.00 TEP was requesting got an

"installation fee". -- TEP power was restored on 06/17/2010 and for the summer months

the bills reflect his home using a combination of Solar and Grid Power to be able to run

his 4Ton AC & Unit 24/7 under the Solar only period, his usage of the 4Ton AC Unit

was limited to only the Sunlight hours when the system was indeed maintaining the AC

with the current available, but no capacity to "store any current for the hours of no sun".

Thus the following electric bill reflect the "power usage" in the under grid support mode-

-using a combination of 40% electricity from grid, and 60% from solar system. When the

Temperatures dropped consistent 95F or less, customer again re set his system to support

the electric needs of the home on Solar System alone, and then is when the rest of the

Electric Bills are only for the \$7.96 Fee TEP charges to maintain the account OPEN, with

current consumption ZERO as indicated by the attached TEP Bills, a condition that will

remain constant until the temperature will raise above a consistent 100F, then the system

will revert back to the Grid Support Mode -until such time customer is able to purchase the required PV's (1,680 Watts and additional 12 batteries) to make the system fully self supporting for the entire 12 months of the year -- not needing any grid power, unless there is a catastrophic event that will cause a Nuclear winter/black cloud event.

By Viktor Peter Polivka



Final Bill

Account: ~~111017660~~
 Bill Date: 4-15-2010
 Customer Name: POLIVKA, VIKTOR P
 Service Address: ~~111017660~~
 TUCSON AZ 85730-4537

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 15.31 | 15.31 | 9.71 | 9.71 |

| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 4-27-2010 | \$9.71 |

Payment: \$15.31 on 04/07/2010 - Thank You!

R-01 - Residential (Closed Service No. ~~111017660~~)

Electric Charges for Period 03-31 - 04-12

DELIVERY SERVICES

Customer Charge 7.00
 Winter - 1st 500 kWh 20 @ \$0.047309 0.95

POWER SUPPLY CHARGES

Winter - kWh 20 @ \$0.025698 0.51
 PPFAC - kWh 20 @ \$0.00

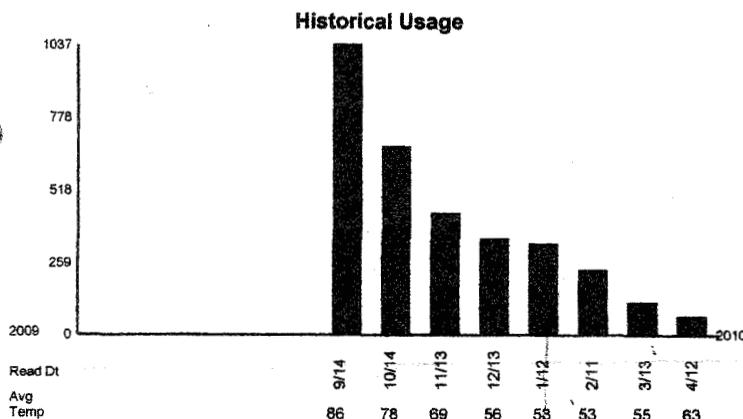
GREEN ENERGY CHARGES

Renewable Energy Standard Tariff 0.17
 DSM Surcharge - kWh 20 @ \$0.000831 0.02

TAXES AND ASSESSMENTS

ACC Assessment 0.01
 City Franchise Fee 0.19
 State Sales Tax 0.50
 County Sales Tax 0.04
 City Sales Tax 0.17
 City Public Utility Tax 0.15

Total Electric Service Charges 9.71



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 4-28 | 4-12 | 3-30 | 13 | 8110 | 8108 | 2 | 10 | 20 |

NOTE: 9th electric bill w/ JAC - ASKED TO DISCONNECT FROM GRID - FOR APPROVAL OF OFF GRID SYSTEM - THE REDUCTION OF ELECTRIC USAGE - DUE TO TOOLS THE SYSTEM FOR OLD PERFORMANCE - THAT TOOK 4 MONTHS TO ACHIEVE THE DESIRED SAVINGS - SYSTEM RUNNING ON GRID SUPPLY w/ INTENTIONAL GRID POWER -

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 20.87 | 20.87 | 15.31 | 15.31 |

| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 4-12-2010 | \$15.31 |

Payment: \$20.87 on 03/10/2010 - Thank You!

R-01 - Residential (Service No. ~~00000000~~)

Electric Charges for Period 03-02 - 03-30

DELIVERY SERVICES

Customer Charge 7.00
Winter - 1st 500 kWh 80 @ \$0.047309 3.78

POWER SUPPLY CHARGES

Winter - kWh 80 @ \$0.025698 2.06
PPFAC - kWh 80 @ \$0.00

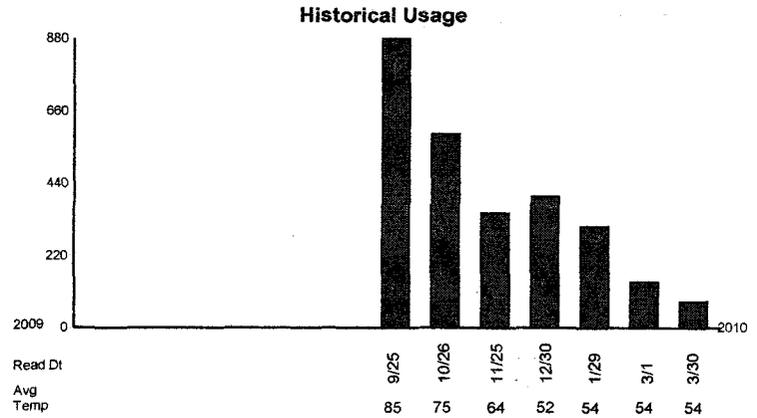
GREEN ENERGY CHARGES

Renewable Energy Standard Tariff 0.69
DSM Surcharge - kWh 80 @ \$0.000831 0.07

TAXES AND ASSESSMENTS

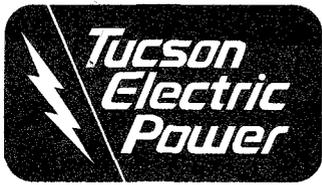
ACC Assessment 0.02
RUCO Assessment 0.01
City Franchise Fee 0.31
State Sales Tax 0.79
County Sales Tax 0.07
City Sales Tax 0.27
City Public Utility Tax 0.24

Total Electric Service Charges 15.31



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 4-28 | 3-30 | 3-01 | 29 | 8108 | 8100 | 8 | 10 | 80 |

Reading @ Shut off, 8110
NOTE: 80 EVET BILL W/AC
SOUR USUAL NOT COMPLETE



A UniSource Energy Company

20 days on

Account: ~~XXXXXXXXXX~~
 Bill Date: 3-03-2010
 Customer Name: POLIVKA, VIKTOR P
 Service Address: ~~XXXXXXXXXXXXXXXXXXXX~~
 TUCSON AZ 85730-4537

*Bill
 Lepper / Shaw*

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 36.46 | 36.46 | 20.87 | 20.87 |

| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 3-15-2010 | \$20.87 |

Payment: \$36.46 on 02/05/2010 - Thank You!



R-01 - Residential (Service No. ~~XXXXXXXXXX~~)

Electric Charges for Period 01-30 - 03-01

DELIVERY SERVICES

Customer Charge
 Winter - 1st 500 kWh 140 @ \$0.047309

POWER SUPPLY CHARGES

Winter - kWh 140 @ \$0.025698
 PPFAC - kWh 140 @ \$0.00

GREEN ENERGY CHARGES

Renewable Energy Standard Tariff
 DSM Surcharge - kWh 140 @ \$0.000831

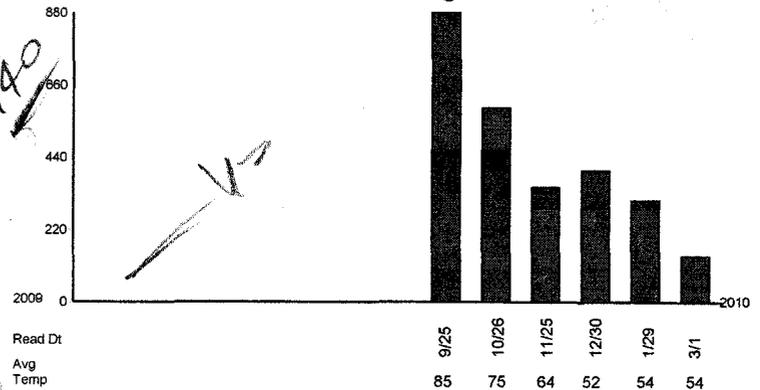
TAXES AND ASSESSMENTS

ACC Assessment 0.03
 RUCO Assessment 0.01
 City Franchise Fee 0.42
 State Sales Tax 1.08
 County Sales Tax 0.09
 City Sales Tax 0.37
 City Public Utility Tax 0.32

Total Electric Service Charges 20.87

| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 3-30 | 3-01 | 1-29 | 31 | 8100 | 8086 | 14 | 10 | 140 |

Historical Usage



*NOTE: 7th ELECTRIC BILL w/ AC NOT
 REQUIRED FOR COOLING*



A UniSource Energy Company

Account: [REDACTED]
 Bill Date: 2-01-2010
 Customer Name: POLIVKA, VIKTOR P
 Service Address: [REDACTED]
 TUCSON AZ 85730-4537

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 44.72 | 44.72 | 36.46 | 36.46 |

| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 2-11-2010 | \$36.46 |

Payment: \$44.72 on 01/06/2010 - Thank You!

R-01 - Residential (Service No [REDACTED])

Electric Charges for Period 12-31 - 01-29

DELIVERY SERVICES

Customer Charge 7.00
 Winter - 1st 500 kWh 310 @ \$0.047309 14.67

POWER SUPPLY CHARGES

Winter - kWh 310 @ \$0.025698 7.97
 PPFAC - kWh 310 @ \$0.00

GREEN ENERGY CHARGES

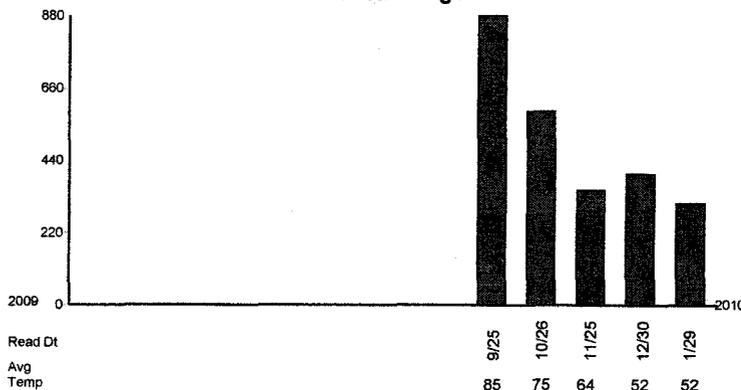
Renewable Energy Standard Tariff 2.48
 DSM Surcharge - kWh 310 @ \$0.000831 0.26

TAXES AND ASSESSMENTS

ACC Assessment 0.06
 RUCO Assessment 0.01
 City Franchise Fee 0.73
 State Sales Tax 1.89
 County Sales Tax 0.17
 City Sales Tax 0.65
 City Public Utility Tax 0.57

Total Electric Service Charges 36.46

Historical Usage



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 3-01 | 1-29 | 12-30 | 30 | 8086 | 8055 | 31 | 10 | 310 |

NOTE: C-6 ELECT BILL W/AC NO
 COOLING REQUIRED - SAVES INSURANCE
 SOLAR SYSTEM



A UniSource Energy Company

Account: [REDACTED]
 Bill Date: 12-31-2009
 Customer Name: POLIVKA, VIKTOR P
 Service Address: [REDACTED]
 TUCSON AZ 85730-4537

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 40.58 | 40.58 | 44.72 | 44.72 |

| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 1-12-2010 | \$44.72 |

Payment: \$40.58 on 12/07/2009 - Thank You!

R-01 - Residential (Service No. [REDACTED])

Electric Charges for Period 11-26 - 12-30

DELIVERY SERVICES

Customer Charge 7.00
 Winter - 1st 500 kWh 400 @ \$0.047309 18.92

POWER SUPPLY CHARGES

Winter - kWh 400 @ \$0.025698 10.28
 PPFAC - kWh 400 @ \$0.00

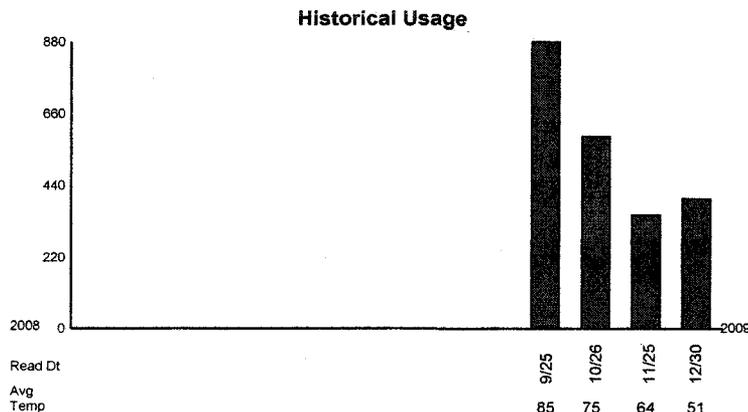
GREEN ENERGY CHARGES

Renewable Energy Standard Tariff 3.20
 DSM Surcharge - kWh 400 @ \$0.000831 0.33

TAXES AND ASSESSMENTS

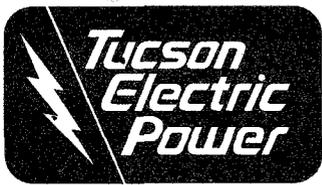
ACC Assessment 0.07
 RUCO Assessment 0.02
 City Franchise Fee 0.89
 State Sales Tax 2.31
 County Sales Tax 0.21
 City Sales Tax 0.79
 City Public Utility Tax 0.70

Total Electric Service Charges 44.72



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 1-29 | 12-30 | 11-25 | 35 | 8055 | 8015 | 40 | 10 | 400 |

NOTE: 5th ELECTRIC BILL W/AC FROM UNIT
 IF UP NOT REQUIRED FOR COOLING MONTH



A UniSource Energy Company

Account: [REDACTED]
 Bill Date: 11-30-2009
 Customer Name: POLIVKA, VIKTOR P
 Service Address: [REDACTED]
 TUCSON AZ 85730-4537

Handwritten signature

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 68.95 | 68.95 | 40.58 | 40.58 |

| DUE DATE | AMOUNT DUE |
|------------|------------|
| 12-10-2009 | \$40.58 |

Payment: \$68.95 on 11/02/2009 - Thank You!

R-01 - Residential (Service No. [REDACTED])

Electric Charges for Period 10-27 - 11-25

DELIVERY SERVICES

Customer Charge 7.00
 Summer - 1st 500 kWh 58 @ \$0.046925 2.72
 Winter - 1st 500 kWh 292 @ \$0.047309 13.81

POWER SUPPLY CHARGES

Summer - kWh 58 @ \$0.033198 1.93
 Winter - kWh 292 @ \$0.025698 7.50
 PPFAC - kWh 350 @ \$0.00 0.00

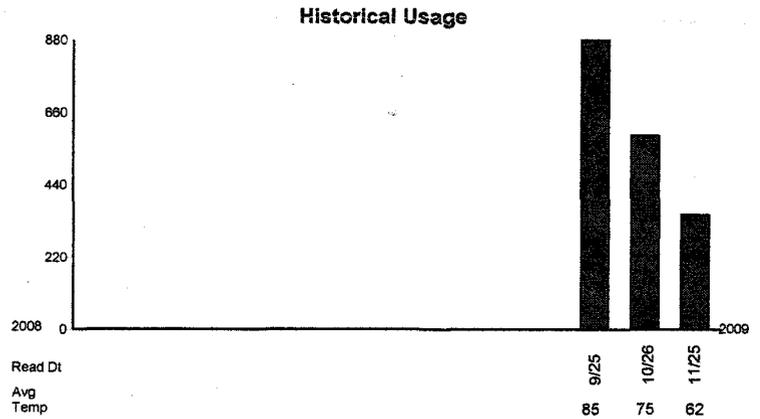
GREEN ENERGY CHARGES

Renewable Energy Standard Tariff 2.80
 DSM Surcharge - kWh 350 @ \$0.000831 0.29

TAXES AND ASSESSMENTS

ACC Assessment 0.07
 RUCO Assessment 0.01
 City Franchise Fee 0.81
 State Sales Tax 2.10
 County Sales Tax 0.19
 City Sales Tax 0.72
 City Public Utility Tax 0.63

Total Electric Service Charges 40.58



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 12-30 | 11-25 | 10-26 | 30 | 8015 | 7980 | 35 | 10 | 350 |

NOTE: 4th ELECT BILL - INSTALLED AC MID MOUNT (410V) - MORE COOLING - NOISE FROM UNIT



A UniSource Energy Company

Account: ~~XXXXXXXXXX~~
 Bill Date: 10-27-2009
 Customer Name: POLIVKA, VIKTOR P
 Service Address: ~~XXXXXXXXXX~~
 TUCSON AZ 85730-4537

3

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 102.57 | 102.57 | 68.95 | 68.95 |

| DUE DATE | AMOUNT DUE |
|------------|------------|
| 11-09-2009 | \$68.95 |

Payment: \$102.57 on 10/05/2009 - Thank You!

R-01 - Residential (Service No. ~~XXXXXXXXXX~~)

Electric Charges for Period 09-26 - 10-26

DELIVERY SERVICES

Customer Charge 7.00
 Summer - 1st 500 kWh 500 @ \$0.046925 23.46
 Summer - Next 3000 kWh 90 @ \$0.06896 6.21

POWER SUPPLY CHARGES

Summer - kWh 590 @ \$0.033198 19.59
 PPFAC - kWh 590 @ \$0.00

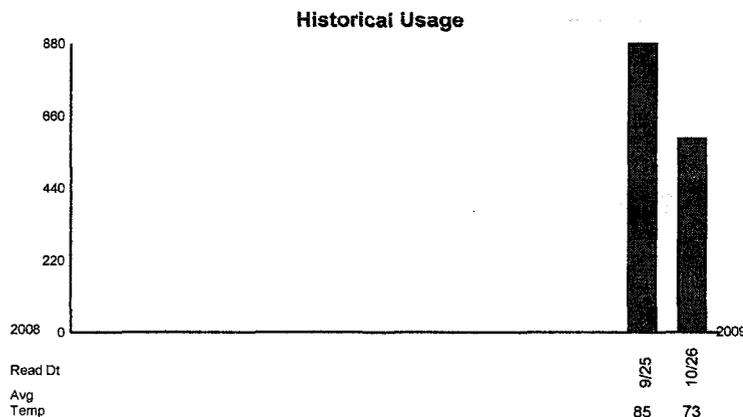
GREEN ENERGY CHARGES

Renewable Energy Standard Tariff 4.50
 DSM Surcharge - kWh 590 @ \$0.000831 0.49

TAXES AND ASSESSMENTS

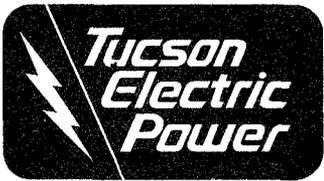
ACC Assessment 0.11
 RUCO Assessment 0.02
 City Franchise Fee 1.38
 State Sales Tax 3.57
 County Sales Tax 0.32
 City Sales Tax 1.23
 City Public Utility Tax 1.07

Total Electric Service Charges 68.95



| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 11-25 | 10-26 | 9-25 | 31 | 7980 | 7921 | 59 | 10 | 590 |

NOTE: 3rd ELECT BILL NO AC



A UniSource Energy Company

Account: [REDACTED]
Bill Date: 9-28-2009
Customer Name: POLIVKA, VIKTOR P
Service Address: [REDACTED]
TUCSON AZ 85730-4537

Chick 10/1/09

Handwritten notes: \$2200 + P.P.S., 5720, collected

Table with 4 columns: Previous Balance, Payments/Credits, + Charges/Debits, = Current Balance. Values: 120.13, 120.13, 102.57, 102.57

Table with 2 columns: DUE DATE, AMOUNT DUE. Values: 10-08-2009, \$102.57

Payment: \$70.13 on 09/02/2009 - Thank You!

R-01 - Residential (Service No. [REDACTED])

Electric Charges for Period 08-26 - 09-25

DELIVERY SERVICES

Customer Charge 7.00
Summer - 1st 500 kWh 500 @ \$0.046925 23.46
Summer - Next 3000 kWh 380 @ \$0.06896 26.20

POWER SUPPLY CHARGES

Summer - kWh 880 @ \$0.033198 29.21
PPFAC - kWh 880 @ \$0.00

GREEN ENERGY CHARGES

Renewable Energy Standard Tariff 4.50
DSM Surcharge - kWh 880 @ \$0.000831 0.73

TAXES AND ASSESSMENTS

AZISA Assessment 0.01
ACC Assessment 0.17
RUCO Assessment 0.04
City Franchise Fee 2.05
State Sales Tax 5.31
County Sales Tax 0.48
City Sales Tax 1.82
City Public Utility Tax 1.59

Handwritten notes: 19% 10/1/09, 255%, 285%

Handwritten notes: 500-3, 10, 5, 500-3, 10, 5

Total Electric Service Charges 102.57

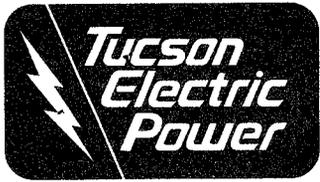
Table with 11 columns: Meter, Unit of Measure, Next Read Date, Current Read Date, Prior Read Date, Days, Current Reading, - Prior Reading, = Reading Difference, x Multiplier, = Usage. Values: XH-331582, KWH, 10-26, 9-25, 8-25, 31, 7921, 7833, 88, 10, 880

Deposit Refund (Closed Service No. [REDACTED])

Deposit Refund or Adjustment 50.00 CR

Handwritten notes: 20, 9/18-8304, 8304

Handwritten notes: NOTE: 2% ELECT BILL - NO AC - ONLY COOLER -> UP TO 14 COW - 0.75 @ US - 0.75 @ US - TEP.COM



A UniSource Energy Company

Account: ~~XXXXXXXXXX~~
 Bill Date: 8-27-2009
 Customer Name: POLIVKA, VIKTOR P
 Service Address: ~~XXXXXXXXXXXXXXXXXXXX~~
 TUCSON AZ 85730-4537

JAX
602-680-1218
ATtn: Joyce

| Previous Balance | - Payments/Credits | + Charges/Debits | = Current Balance |
|------------------|--------------------|------------------|-------------------|
| 0.00 | 0.00 | 120.13 | 120.13 |

| DUE DATE | AMOUNT DUE |
|-----------|------------|
| 9-08-2009 | \$120.13 |

R-01 - Residential (Service No. 4110417710)

Electric Charges for Period 08-12 - 08-25

DELIVERY SERVICES

Customer Charge 7.00
 Summer - 1st 500 kWh 470 @ \$0.046925 22.05

POWER SUPPLY CHARGES

Summer - kWh 470 @ \$0.033198 15.60
 PPFAC - kWh 470 @ \$0.00

GREEN ENERGY CHARGES

Renewable Energy Standard Tariff 3.76
 DSM Surcharge - kWh 470 @ \$0.000831 0.39

TAXES AND ASSESSMENTS

ACC Assessment 0.09
 RUCO Assessment 0.02
 City Franchise Fee 1.10
 State Sales Tax 2.84
 County Sales Tax 0.25
 City Sales Tax 0.98
 City Public Utility Tax 0.85

Total Electric Service Charges 54.93
 Service Establishment Fee (including taxes) 15.20

Total Charges 70.13

*Send APS
 credit of credit
 8/31/2009*

| Meter | Unit of Measure | Next Read Date | Current Read Date | Prior Read Date | Days | Current Reading | - Prior Reading | = Reading Difference | x Multiplier | = Usage |
|-----------|-----------------|----------------|-------------------|-----------------|------|-----------------|-----------------|----------------------|--------------|---------|
| XH-331582 | KWH | 9-25 | 8-25 | 8-11 | 14 | 7833 | 7786 | 47 | 10 | 470 |

Deposit (Service No. 4110417076)

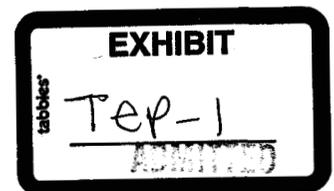
Deposit Installment Amount \$50.00

520-918-8294
BRANCA ANDERSON

*NOTE: FIRST ELECT BILL
 AT NEW ADDRESS —
 WITHOUT HAVING A TON
 AC UNIT!*

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EXHIBIT 1



Wednesday, February 17, 2010

Viktor Peter Polivka
4675 S. Harrison Rd. #82
Tucson, Arizona 85730
Phone: 520-303-7308

Mrs. Blanca Anderson
Tucson Electric power Company
PO. Box 711
Tucson, Arizona 85702
Phone: 520-918-8296

RE: On Grid Residential Solar Electric Application
Ref: Acct. # 4110417652

Dear Mrs. Anderson:

Enclosed is my application for the On Grid Solar Electric Incentive (UFI). I've attached all the available publications that refer to my equipment am installing in my residence at the above listed address. The application is filled to the extend that I was able complete. I called the Tucson Development Office for a permit , but the answer is quite nebulous regarding the need for a permit – in fact, I'm installing a "low voltage system (24VDC), which needs no permit; but now they changed the "classification" since I'm using inverters, allegedly I then need a permit.

The main issue now will be the fact, that I'm living in a "Mobile Home"(apparently there are no mobile homes in Tucson that have applied for the On Grid Residential Solar Electric, hence they are "applying the standards that apply to a standard home construction of "fixed structures and not mobile. The fact that mobile homes indeed meet building codes for a manufactured home and are approved as such is a reality and a fact of life. Hence, discriminating against mobile homes for not meeting construction standards' is not equitable. The are built to a unique construction codes, that do not apply to homes. However, they are not able to met the "construction standards of a fixed custom home residence. This therefore now becomes a "Catch 22" dilemma , for some structural elements have been omitted or modified, thus the mobile home can not meet the standard the code enforcement people want to impose, yet they are APPROVED by the State of Arizona as a mobile unit.

The main issue at hand is the "structural" composition of the roof design as compared to a fixed home. I've contacted several Architects in Tucson, and they referred me to a" Structural Engineer. However, when I called, the Engineer stated that he no longer does "structural evaluations on mobile homes (he also stated that this is due to his insurance company no longer covering mobile homes, and that all Structural Engineers in Tucson have the same problem –they do not evaluate structural elements of mobile homes, since most have the same insurance company – I also called the manufacturer of my

mobile home Cavco, but the Engineer is out of the office until March (vacation). But, I'm certain that they do not have any documentation of the structural elements for my unit on file any longer (1984 model).

The only way I see how to "alleviate" the structural stress, if any by the Solar Arrays to wind exposure, is to "lower" the modules to the original flat mounting parallel to the pitch of the roof 16degrees, this then will eliminate the wind stress and only the total weight of the modules would be a factor (combined weight is 1000lbs). Also, they are trying to "enforce" a wind load to a category 2 Hurricane. The mounting rails will withstand un to category 5, but I doubt that the roof or the entire structure would fly off long before that (as a mater of fact, I do not believe that many homes in Tucson would withstand that sort of wind load anyway!

Well I'll give it a try, and maybe I'll be approved for the incentive. Also during the conversation with the "code person", he motioned something about the Sunshade program, that does not need to have a permit for the Solar system as long as it is approved by TEP! Maybe. I'll qualify for that program.

I'm sending you 2 applications: one for the On Grid Residential Solar Electric and the other for the Off Grid Residential Solar Electric -I do not see what the difference is the apps are the same- but, if that is the only alternative to qualify for the incentive, why not. I can go Off Grid, but then TEP would not be able to receive my excess electricity I'll harvest - I guess, I'll have to purchase a truck full of light bulbs to consume the unneeded current?

With hopes that I'm on the right track and will come to some sort of agreement, otherwise, I'll just have a very expensive electric system that will never pay for itself, I'll have to live 495 years more just to break even....

Cordially yours,

Viktor Peter Potyvka

PS. PEASE NOTE MY NEW PHONE NUMBER. It is: 520-303-7308

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EXHIBIT 2

EXHIBIT
tabbles
Tap-2

OPTION # 1
OPTION # 1

Mobile Home
~~Net Agreement~~

Annual in year

ACC APPROVED 4/10/08

TUCSON ELECTRIC POWER COMPANY ON-GRID RESIDENTIAL SOLAR ELECTRIC APPLICATION



SunShare

Customer Information

Name (As it appears on utility bill) Viktor P. Polivka
Mailing Address 4675 S. HARRISON RD LOT #82
City TUCSON, AZ Zip Code 85730
Street Address (If different from above) _____
Daytime Phone Number 520-303-7308
E-mail Address: P.POLIVKA@COT.NET Account Number ~~XXXXXXXXXX~~
Operating Agent (If different from Customer) _____

Solar - PV System Information

Module Supplier Name KYOCERA/ALTE Nameplate DC Rating 210 watts
Module Manufacturer KYOCERA Type KD210GX LP Quantity of Modules 24
Module Warranty 20 year (Copy of warranty must be on file with Tucson Electric Power.)
Inverter Make and Model Number VANTAGE XW4024-120/240-60
Inverter Warranty 5 years (Copy of inverter warranty must be on file with Tucson Electric Power.)
Total Cost 49,344.60 PV Cost 18,705.50 Labor Cost SELF INSTAL
Estimated Installation Date MARCH 1, 2010

System Qualifications

The system must meet the requirements outlined in Attachment A and Attachment B of the On-Grid Residential Solar Up Front Incentive (UFI) or Performance Based Incentive (PBI) Agreements.

Rebate Calculation

Rebate Calculation: Nameplate DC Rating 210 Watts x Quantity of Panels 24 = System Size 5040W

UFI Calculation for residential projects with a 10 year inverter warranty.

Rebate Calculation: 5040 kW (System Size) x \$3.00 per W = 15,120

Rebate Calculation for Self-Install: _____ kW (System Size) x \$3.00 x 70% = _____

UFI - Residential BIPV 5 kW DC or less

Rebate Calculation: _____ kW (System Size) x \$ _____ x 90% = _____ (UFI)

PBI Calculation for residential projects with less than a 20 year module warranty or less than a 10 year inverter warranty or for residential projects with a BIPV system over 5 kW .

Estimated annual energy production of system _____ kwh x PBI amount _____ \$/kwh = _____ PBI

TEP rebate cannot be more than 60% of system cost. Customer must pay at least 15% of system cost.

Customer Reservation Bid

Customer may elect to use maximum PBI payback listed in the Project Incentive Matrix or choose a smaller PBI amount that will be more competitive in the period ranking system.

Project Information

Has a City/County Permit been secured? _____ Yes No

Is this an application for Net Metering: _____ Yes No (Net metering applies to systems 10 kW AC or less)

Does this installation meet all ACC Interconnection/REST requirements? Yes _____ No

Installer Information

Installer/Dealer Name _____

Business Address _____

Arizona Registrar of Contractors (AZROC) License Information

AZROC License Number _____ Class _____ Expiration Date _____

Assignment of Payment

I authorize Tucson Electric Power (TEP) to issue, on my behalf, my full rebate to the following installer/dealer as payment toward the cost and/or installation of my PV system. I acknowledge that the payment made to the below named installer satisfies the financial obligation to me in connection with the Agreement signed by myself and TEP.

Company Name _____

Contact Person _____

Business Address _____

Customer Signature _____ Date _____

Inspection Authorization

TEP, at its option, may perform periodic inspections of the system to ensure it is operating efficiently and safely. Presently TEP outsources all SunShare inspection services to a qualified third-party contractor. Do you authorize TEP to use a qualified third party contractor for your annual inspection?

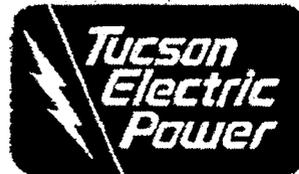
Authorization Agreed
Authorization Denied

There are animals in the yard that the Program Inspector needs to be aware of: Yes No (DOG)

WHEN COMPLETE PLEASE MAIL TO: SunShare/Renewables, PO Box 711, Mailstop DS501, Tucson, AZ 85702

OPTION #1

REVISION 0
ACC APPROVED 4/10/08



A UniSource Energy Company

SunShare Residential Solar Program Grid-Tied Up Front Incentive (UFI) Renewable Energy Credit Purchase Agreement

This Grid-Tied Residential Solar Up Front Incentive (UFI) Agreement (the "Agreement") is hereby made and entered into this 29th day of FEBRUARY, 2010, by and between Tucson Electric Power Company, an Arizona corporation ("Company"), and Viktor Peter Kovacs, ("Customer"). Company and Customer may be referred to individually herein as a "Party" or collectively as the "Parties." Grid-Tied Residential Solar is hereby referred to as the "Program."

RECITALS

A. Company desires to increase the number of solar electricity generation facilities and the consumption of solar electricity within its service territory, while concurrently reducing the cost of solar electric generation systems for its customers. In support of these objectives and to further Company's continuing commitment to develop and encourage the use of renewable energy resources, Company has implemented the Program to provide financial incentives to its customers to install solar generating equipment; and

B. Company desires for Customer to participate in the Program and Customer desires to so participate under the terms and conditions contained in this Agreement, at the address of 4675 S. HARRISON RD, 85712, TUCSON, Arizona (the "Premises").

NOW, THEREFORE, in consideration of these premises and of the mutual promises herein contained, Company and Customer hereby agree as follows:

AGREEMENT

1. PROGRAM

Customer shall elect to participate in the Program by entering into this Agreement subject to the following conditions:

1.1 Renewable Energy System

1.1.1 System. Customer shall purchase a renewable energy generating system from any third party of Customer's choice ("Customer System"). To qualify under the Program, any such Customer System must comply with all renewable energy grid-tied residential solar technology specific requirements set forth in Attachment A "System Qualifications" and Attachment B "Off Angle & Shading Annual Derating Chart", which are attached hereto and incorporated herein.

1.1.2 Basis of Payment. The calculation of Customer environmental credits and Company payments hereunder shall be based on the system capacity or estimated energy kWh production rather than on measured system output. This represents a one time Up Front Incentive ("UFI") payment method.

2. SYSTEM INSTALLATION

To qualify for participation in the Program, all Customer Systems shall be installed by or on behalf of Customer in accordance with the requirements set forth in Attachment A and Attachment B, including, without limitation, a proper interconnection with Company's existing power grid. Customer shall be solely responsible for the installation of the Customer System, including all costs and expenses associated therewith.

3. SYSTEM INSPECTION

Following installation of Customer's System, Company shall inspect the Customer System for compliance with the applicable requirements set forth in Attachment A and Attachment B. If the Customer System or installation is found to be not in compliance for any reason, Company will notify Customer of the deficiencies causing the noncompliance. Company will have no further obligations under this Agreement until all such deficiencies are remedied by Customer to Company's reasonable satisfaction.

4. SYSTEM ELECTRICAL OUTPUT

Customer hereby assigns to Company all of its rights to all electrical output of the Customer System and all associated environmental credits, specifically including those created under the Arizona Corporation Commission's Renewable Energy Standard and Tariff Program (the "REST"), which may result from the installation and use of the Customer System. Company will thereafter return any and all value of such electric output to the Customer at no cost to

Customer. Company's right to Customer's power output and Renewable Energy Credits assigned hereunder shall continue until December 31st of the 20th full calendar year after completion of the installation of the Customer System in compliance with this Agreement (the "Assignment Period") and shall survive any termination of this Agreement.

5. RENEWABLE ENERGY CREDIT PURCHASE

Subject to the Customer System passing the Company inspection set forth in Section 3 above and to Customer's compliance with the remaining terms and conditions of this Agreement, Company shall pay Customer \$3.00 per DC Watt of installed on-grid residential solar generating capacity of the Customer System for which completed Agreements are received and accepted by the Company and which system is operational within 180 days after application acceptance, as prorated by any de-rating for off-angle and shading that may apply by the percentages listed on the chart in Attachment B. The Customer System's DC Watts of installed on-grid residential solar generating capacity shall be determined by Company following Company's receipt of a copy of the City or County building permit associated with the installation of the Customer System, successful Customer System inspection and determination of the level of compliance with Attachment B. Any amounts determined to be owed under this Section shall be paid by Company to Customer within 30 days following the Company's completion of AC kWh testing hereunder.

6. RIGHTS TO CREDITS

Company shall have the right to the Renewable Energy Credits from the Customer System until the end of the Assignment Period. Customer shall not offer to sell or trade Renewable Energy Credits from the Customer System to any other party during this time. Customer shall not remove the Customer System or any components thereof from the Premises during the Assignment Period without express agreement of Company. If Customer removes the Customer System in violation of this Section 6, Customer shall immediately reimburse Company all UFI amounts paid by Company to Customer hereunder.

7. METER READING

Once per year, typically in late December, during the term of this Agreement, Company shall read the Customer System solar production meter. Thus, Company reserves the right to read, at its option, the Customer System meter. Customer shall provide Company with reasonable access to its Customer System to conduct any such readings.

8. WARRANTY

COMPANY MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND HEREUNDER, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PERFORMANCE HEREUNDER WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, COMPANY MAKES NO REPRESENTATIONS

OR WARRANTIES WITH RESPECT TO THE CUSTOMER SYSTEM, ITS OPERATION, SAFETY, INSTALLATION, OR COMPLIANCE WITH ANY BUILDING OR SAFETY CODES, RULES OR REGULATIONS, AND TO THE MAXIMUM EXTENT PERMITTED BY LAW, COMPANY HEREBY EXPRESSLY DISCLAIMS ANY AND ALL LIABILITY ASSOCIATED THEREWITH.

9. LIMITATION OF LIABILITY

COMPANY'S ENTIRE LIABILITY ARISING OUT OF ITS PERFORMANCE UNDER THIS AGREEMENT SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES STEMMING FROM CLAIMS DIRECTLY ATTRIBUTABLE TO COMPANY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT. IN NO EVENT SHALL COMPANY, ITS EMPLOYEES OR AGENTS BE LIABLE TO CUSTOMER FOR LOSS OF PROFITS OR ANY OTHER SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGE, HOWEVER CAUSED, RESULTING FROM COMPANY'S PERFORMANCE HEREUNDER.

10. TERMINATION

If either Party shall at any time commit any material breach of any covenant or warranty under this Agreement and shall fail to cure the same within 30 days following written notice thereof, the non-breaching Party may terminate this Agreement, in whole or in part. This Agreement may also be terminated at any time by mutual written agreement of the Parties.

11. MISCELLANEOUS

- 11.1 Modification, Waiver and Severability. This Agreement may not be modified or supplemented except by written instrument signed by the Parties. No waiver of any default or breach hereof shall be deemed a waiver of any other default or breach thereof. If any part of this Agreement is declared void and/or unenforceable, such part shall be deemed severed from this Agreement which shall otherwise remain in full force and effect.
- 11.2 Assignment. This Agreement and the rights, duties, and obligations hereunder may not be assigned or delegated by any Party without the prior written consent of Company.
- 11.3 Governing Law and Venue. This Agreement shall be governed by the laws of the State of Arizona, without regard to the choice of law provisions thereof. Venue for any dispute arising hereunder shall be any court of competent jurisdiction located in Pima County, Arizona.
- 11.4 Entire Agreement. This Agreement is the final integration of the agreement between the Parties with respect to the matters covered by it and supersedes any prior understanding or agreements, oral or written, with respect thereto.

- 11.5 Counterparts. This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same Agreement.
- 11.6 Titles and Captions. Titles or captions contained in this Agreement are inserted for convenience and for reference only and in no way define, limit, extend, or describe the scope of this Agreement or the intent of any provision hereof.
- 11.7 Expenses and Attorney's Fees. In the event of a breach or threatened breach of any term or provision of this Agreement, the non-breaching party shall be entitled to all of its remedies available at law or in equity, unless otherwise limited in this Agreement, and in addition shall be entitled to be reimbursed for all of its reasonable costs and expenses in enforcing this Agreement (if successful), including, but not limited to, reasonable attorney's fees. This section shall survive termination or expiration of this Agreement for any reason.
- 11.8 Force Majeure. Neither Party shall be liable to the other for failure to perform its obligations hereunder to the extent such failure results from causes beyond its reasonable control, including strikes, climatic conditions, acts of God, governmental laws, regulations, orders or requirements, interruptions of power or unavailability of equipment or supplies.
- 11.9 Customer Sale of Premises. In the event Customer sells the Premises where the Customer installed the Customer System, Customer's successor-in-interest shall expressly assume all of Customer's obligations hereunder in writing, and this Agreement shall not be affected, nor shall Company's rights hereunder be disturbed in any way, including, without limitation, Company's continued right to all Renewable Energy Credits assigned pursuant to Section 4 hereunder.
- 11.10 Notices. All notices under this Agreement shall be in writing and shall be given to the Parties thereto by personal service (including receipted confirmed facsimile), or by certified or registered mail, return receipt requested, or by recognized overnight courier service, to the Parties at the addresses set forth below. All notices shall be deemed given upon the actual receipt thereof.

Company: Tucson Electric Power Company
PO Box 711
Tucson, Arizona 85702
Fax: (520) 918-8350
Attn: Renewable Energy & Energy Efficiency Group

[signatures on following page]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of February 22, 2010.

TUCSON ELECTRIC POWER COMPANY

By: _____

Title: _____



CUSTOMER

By: _____

Print Name: Viktor Peter Poulos

Address: 4675 S. HALLISON RD.

LOT # 82

TUCSON, AZ 85730

Phone: 520-303-7308

BELOW TO BE FILLED IN BY UTILITY

Estimated Capacity Reserved: _____ kW

Estimated Funding Reserved: \$ _____

Date Reserved: FEB 22 2010

Application Process
ATTACHMENT A
Grid-Tied Residential Solar System Qualifications

All grid-tied residential solar Customer Systems must meet the following system and installation requirements to qualify for Tucson Electric Power Company's ("TEP" or the "Company") Renewable Energy Credit Purchase Program. Capitalized terms not defined herein shall have the meanings ascribed to them in the Renewable Energy Credit Purchase Program Agreement.

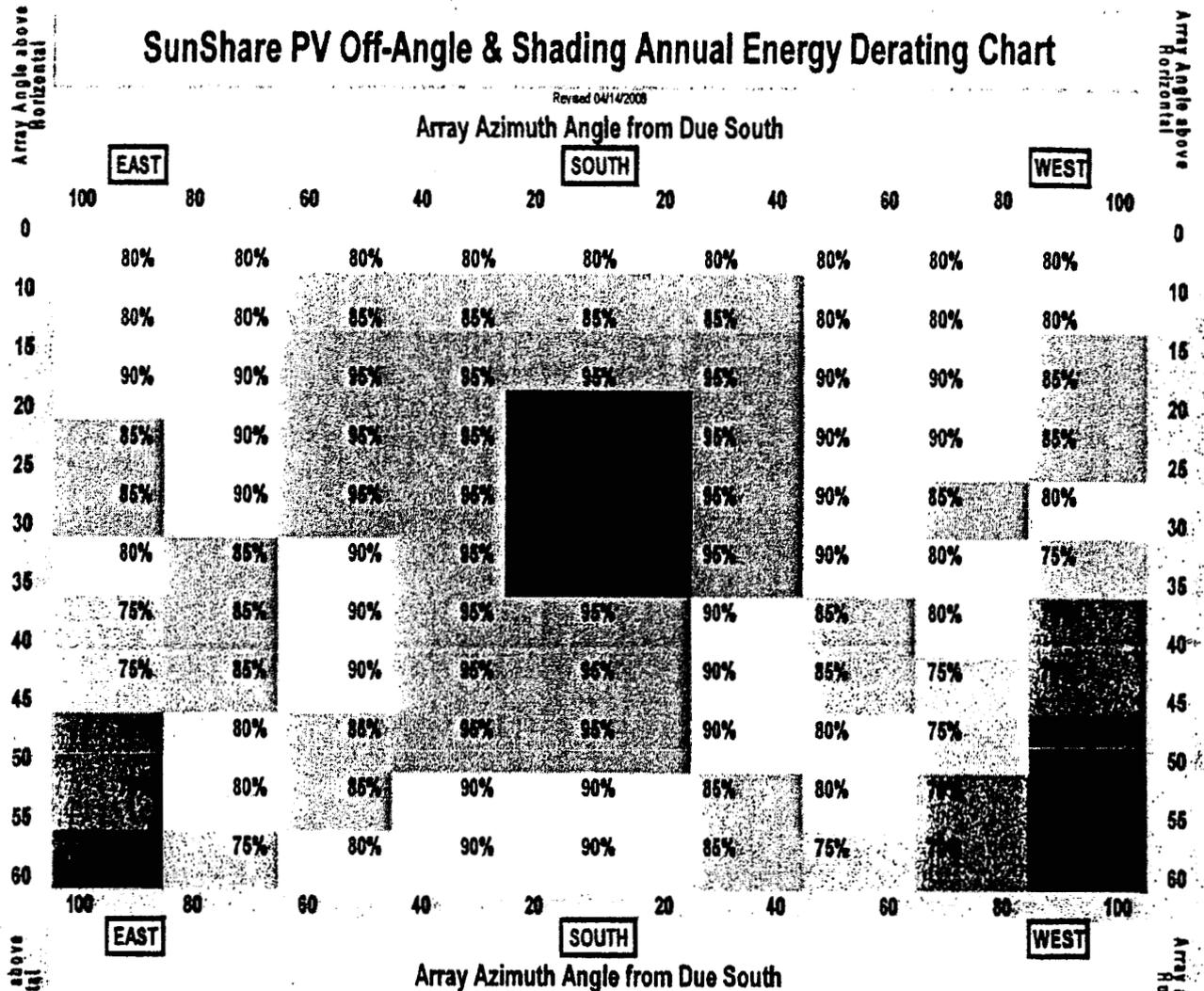
1. All systems shall be installed with a horizontal tilt angle between 10 degrees and 60 degrees, and an azimuth angle of +/- 100 degrees of due south. Installation configurations for some systems receiving a UFI will not be eligible for the full RECPP incentive. The reduction will be determined by the TEP developed de-rating chart, Attachment B of this document, and as discussed further in this report under the section titled Conforming Project Incentives.
2. Qualifying systems using Building Integrated Photovoltaic (BIPV) modules of total array capacity of 5 kWDC or less shall receive 90% of the UFI incentive value for PV systems listed in Attachment A. Systems using BIPV module of total array capacity of greater than 5 kWDC shall only receive a PBI (see on-grid residential PBI Agreement).
3. Photovoltaic modules must be covered by a manufacturer's warranty of at least 20 years.
4. Inverters must be covered by a manufacturer's warranty of at least ten years to receive a UFI and at least five years to receive a PBI (see on-grid residential PBI Agreement).
5. The minimum PV array size shall be no less than 1,200 Wdc.
6. All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of UL Standard 1703.
7. All other electrical components must be UL listed.
8. The inverter must be certified as meeting the requirements of IEEE-1547 - Recommended Practice for Utility Interface of Photovoltaic Systems and it must be UL 1741 certified.
9. The Customer System design and installation must meet all requirements of the latest edition of the National Electrical Code, including Article 690 and all grounding, conductor, raceway, overcurrent protection, disconnect and labeling requirements.

10. The Customer System and installation must meet the requirements of all federal, state and local building codes and have been successfully inspected by the building official having jurisdiction. Accordingly, the installation must be completed in accordance with the requirements of the latest edition of National Electrical Code in effect in the jurisdiction where the installation is being completed (NEC), including, without limitation, Sections 200-6, 210-6, 230-70, 240-3, 250-26, 250-50, 250-122, all of Article 690 pertaining to Solar Photovoltaic Systems, thereof, all as amended and superseded.
11. The Customer System must meet Company and Arizona Corporation Commission interconnection requirements for self-generation equipment.
12. The Customer System installation must meet the TEP Service Requirements 2000 Edition, Page 1.20, as follows:

"AN AC DISCONNECT MEANS SHALL BE PROVIDED ON ALL UNGROUNDED AC CONDUCTORS and SHALL CONSIST OF A LOCKABLE GANG OPERATED DISCONNECT CLEARLY INDICATING OPEN OR CLOSED. THE SWITCH SHALL BE VISUALLY INSPECTED TO DETERMINE THAT THE SWITCH IS OPEN. THE SWITCH SHALL BE CLEARLY LABELED STATING "DG SERVICE DISCONNECT."
13. For Residential Customer Systems, Company will provide a meter and meter socket that will be installed in a readily accessible outdoor location by the Customer between the Customer System and the connection to the overcurrent device in the Customer's electric service panel.
14. Energy storage devices are not allowed as part of the Customer System unless the energy storage charge controller is a separate component and Company can locate the meter at the Customer System's inverter output. Other types of qualified energy storage devices meet PBI requirements (see PBI Agreement).
15. Installation must have been made after January 1, 1997.
16. The Customer must be connected to the Company's electric grid.
17. All Customer System installations must be completed in a professional, workmanlike and safe manner.

ATTACHMENT B
SunShare PV Off-Angle & Shading Annual Energy Derating Chart

SunShare PV Off-Angle & Shading Annual Energy Derating Chart



If both off angle and shading conditions apply, multiply the off angle derating factor with the shading derating factor to obtain the array derating factor for the SunShare payment calculation.

| | | | | | | | | | | |
|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Maximum Morning Shaded Hours | 1 | 0 | 2 | 1 | 2 | 2 | 0 | 0 | 0 | 0 |
| Maximum Evening Shaded Hours | 1 | 2 | 0 | 2 | 1 | 2 | 3 | 0 | 0 | 0 |
| Percentage of Annual Energy = | 95% | 90% | 90% | 85% | 85% | 75% | 75% | 70% | 70% | 70% |

OPTION #2

Net Agreement Disagreed

ACC APPROVED - 4/10/08

* Animal in yard *

TUCSON ELECTRIC POWER COMPANY
OFF-GRID
RESIDENTIAL SOLAR ELECTRIC APPLICATION



Customer Information

Name (As it appears on utility bill) VICTOR P POLIVKA
Mailing Address 4675 S. HARRISON RD LOT #82
City TUCSON, AZ Zip Code 85730
Street Address (if different from above) _____
Daytime Phone Number 520-303-7308
E-mail Address Polivka@comcast.net Account Number [REDACTED]
Operating Agent (if different from Customer) _____

Solar - PV System Information

Module Supplier Name KYOCERA/ATE Nameplate DC Rating 210 watts
Module Manufacturer KYOCERA Type MD210GX Quantity of Modules 24
Module Warranty 20 years (Copy of warranty must be on file with Tucson Electric Power)
Inverter Make and Model Number XANTREX XW4024-120/240-60
Inverter Warranty 5 years (Copy of inverter warranty must be on file with Tucson Electric Power)
Total Cost 49,334.60 PV Cost 18,705.50 Labor Cost SELF INSTAL
Estimated Installation Date MARCH 1, 2010

System Qualifications

The system must meet the requirements outlined in Attachment A and Attachment B of the Off-Grid Residential Solar Up Front Incentive or Performance Based Incentive Agreements.

Rebate Calculation

UFI Calculation for residential projects with a 20 year or longer module warranty and a 10 year or longer inverter warranty.

Nameplate DC Rating 210 Watts x Quantity of Panels 24 = System Size 5040

Rebate Calculation: _____ kW (System Size) x \$2.00 = _____ (UFI)

Rebate Calculation for Self-Install: _____ kW (System Size) x \$2.00 x 70% = _____

UFI – Residential BIPV 5 kW DC or less

Rebate Calculation: _____ kW (System Size) x \$2.00 x 90% = _____ (UFI)

TEP rebate cannot be more than 60% of system cost. Customer must pay at least 15% of system cost.

Customer Reservation Bid

Customer may elect to use maximum PBI payback listed in the Project Incentive Matrix or choose a smaller PBI amount that will be more competitive in the period ranking system.

Project Information

Has a City/County Permit been secured? Yes No

Is this an application for Net Metering: Yes No (Net metering applies to systems 10 kW AC or less)

Does this installation meet all ACC Interconnection/REST requirements? Yes No

Installer Information

Installer/Company Name _____

Business Address _____

Arizona Registrar of Contractors (AZROC) License Information _____

AZROC License Number _____ Class _____ Expiration Date _____

Assignment of Payment

I authorize Tucson Electric Power (TEP) to issue, on my behalf, my full rebate to the following installer/dealer as payment toward the cost and/or installation of my PV system. I acknowledge that the payment made to the below named installer satisfies the financial obligation to me in connection with the Agreement signed by myself and TEP.

Company Name _____

Contact Person _____

Business Address _____

Customer Signature _____ Date _____

Inspection Authorization

TEP, at its option, may perform periodic inspections of the system to ensure it is operating efficiently and safely. Presently TEP outsources all SunShare inspection services to a qualified third-party contractor. Do you authorize TEP to use a qualified third party contractor for your annual inspection?

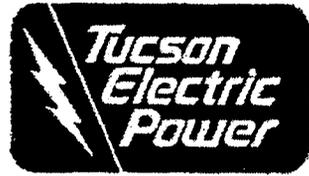
Authorization Agreed
Authorization Denied

There are animals in the yard that the Program Inspector needs to be aware of: ✓ Yes No DOG,

WHEN COMPLETE PLEASE MAIL TO: SunShare/Renewables, PO Box 711, Mailstop DS501, Tucson, AZ 85702

OPTION #2

REVISION 0
ACC APPROVED - 4/10/08



A UniSource Energy Company

**SunShare Residential Solar Program
Off-Grid
Up Front Incentive (UFI)
Renewable Energy Credit Purchase Agreement**

This Off-Grid Residential Solar Up Front Incentive (UFI) Agreement (the "Agreement") is hereby made and entered into this 24 day of FEBRUARY, 2010, by and between Tucson Electric Power Company, an Arizona corporation ("Company"), and Viktor Peter Polivka, ("Customer"). Company and Customer may be referred to individually herein as a "Party" or collectively as the "Parties." Off-Grid Residential Solar is hereby referred to as the "Program."

RECITALS

A. Company desires to increase the number of solar electricity generation facilities and the consumption of solar electricity within its service territory, while concurrently reducing the cost of solar electric generation systems for its customers. In support of these objectives and to further Company's continuing commitment to develop and encourage the use of renewable energy resources, Company has implemented the program to provide financial incentives to its customers to install solar generating equipment (the "Program"); and

B. Company desires for Customer to participate in the Program and Customer desires to so participate under the terms and conditions contained in this Agreement, at the address of 4675 S. HARRISON RD, LOT 82, TUCSON, Arizona (the "Premises").

NOW, THEREFORE, in consideration of these premises and of the mutual promises herein contained, Company and Customer hereby agree as follows:

AGREEMENT

1. PROGRAM

Customer shall elect to participate in the Program by entering into this Agreement subject to the following conditions:

1.1 Renewable Energy System

1.1.1 System. Customer shall purchase a renewable energy generating system from any third party of Customer's choice ("Customer System"). To qualify under the Program, any such Customer System must comply with all renewable energy off-grid residential solar technology specific requirements set forth in Attachment A "System Qualifications" and Attachment B "Off Angle & Shading Annual Derating Chart", which are attached hereto and incorporated herein.

1.1.2 Basis of Payment. The calculation of Customer environmental credits and Company payments hereunder shall be based on the system capacity (Watts DC) rather than on measured system output. This represents a one time Up Front Incentive ("UFI") payment method.

2. SYSTEM INSTALLATION

To qualify for participation in the Program, all Customer Systems shall be installed by or on behalf of Customer in accordance with the requirements set forth in Attachment A and Attachment B, Customer shall be solely responsible for the installation of the Customer System, including all costs and expenses associated therewith.

3. SYSTEM INSPECTION

Following installation of Customer's System, Company shall inspect the Customer System for compliance with the applicable requirements set forth in Attachment A and Attachment B. If the Customer System or installation is found to be not in compliance for any reason, Company will notify Customer of the deficiencies causing the noncompliance. Company will have no further obligations under this Agreement until all such deficiencies are remedied by Customer to Company's reasonable satisfaction.

4. SYSTEM ELECTRICAL OUTPUT

Customer hereby assigns to Company all of its rights to all electrical output of the Customer System and all associated environmental credits, specifically including those created under the

Arizona Corporation Commission's Renewable Energy Standard and Tariff Program (the "REST"), which may result from the installation and use of the Customer System. Company will thereafter return any and all value of such electric output to the Customer at no cost to Customer. Company's right to Customer's power output and Renewable Energy Credits assigned hereunder shall continue until December 31st of the 20th full calendar year after completion of the installation of the Customer System in compliance with this Agreement (the "Assignment Period") and shall survive any termination of this Agreement.

5. RENEWABLE ENERGY CREDIT PURCHASE

Subject to the Customer System passing the Company inspection set forth in Section 3 above and to Customer's compliance with the remaining terms and conditions of this Agreement, Company shall pay Customer \$2.00 per DC Watt of installed off-grid residential solar generating capacity of the Customer System for which completed Agreements are received and accepted by the Company and which system is operational within 180 days after application acceptance, as prorated by any de-rating for off-angle and shading that may apply by the percentages listed on the chart in Attachment B. The Customer System's DC Watt of installed off-grid residential solar generating capacity shall be determined by Company following Company's receipt of a copy of the City or County building permit associated with the installation of the Customer System, successful Customer System inspection and determination of the level of compliance with Attachment B. Any amounts determined to be owed under this Section shall be paid by Company to Customer within 30 days following the Company's completion of AC kWh testing hereunder.

6. RIGHTS FOR CREDITS

Company shall have the right to the Renewable Energy Credits from the Customer System until the end of the Assignment Period. Customer shall not offer to sell or trade Renewable Energy Credits from the Customer System to any other party during this time. Customer shall not remove the Customer System or any components thereof from the Premises during the Assignment Period without express agreement of Company. If Customer removes the Customer System in violation of this Section 6, Customer shall immediately reimburse Company all UFI amounts paid by Company to Customer hereunder.

7. WARRANTY

COMPANY MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND HEREUNDER, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PERFORMANCE HEREUNDER. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, COMPANY MAKES NO REPRESENTATIONS

OR WARRANTIES WITH RESPECT TO THE CUSTOMER SYSTEM, ITS OPERATION, SAFETY, INSTALLATION, OR COMPLIANCE WITH ANY BUILDING OR SAFETY CODES, RULES OR REGULATIONS, AND TO THE MAXIMUM EXTENT PERMITTED BY LAW, COMPANY HEREBY EXPRESSLY DISCLAIMS ANY AND ALL LIABILITY ASSOCIATED THEREWITH.

8. LIMITATION OF LIABILITY

COMPANY'S ENTIRE LIABILITY ARISING OUT OF ITS PERFORMANCE UNDER THIS AGREEMENT SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES STEMMING FROM CLAIMS DIRECTLY ATTRIBUTABLE TO COMPANY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT. IN NO EVENT SHALL COMPANY, ITS EMPLOYEES OR AGENTS BE LIABLE TO CUSTOMER FOR LOSS OF PROFITS OR ANY OTHER SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGE, HOWEVER CAUSED, RESULTING FROM COMPANY'S PERFORMANCE HEREUNDER.

9. TERMINATION

If either Party shall at any time commit any material breach of any covenant or warranty under this Agreement and shall fail to cure the same within 30 days following written notice thereof, the non-breaching Party may terminate this Agreement, in whole or in part. This Agreement may also be terminated at any time by mutual written agreement of the Parties.

10. MISCELLANEOUS

- 10.1. Modification, Waiver and Severability. This Agreement may not be modified or supplemented except by written instrument signed by the Parties. No waiver of any default or breach hereof shall be deemed a waiver of any other default or breach thereof. If any part of this Agreement is declared void and/or unenforceable, such part shall be deemed severed from this Agreement which shall otherwise remain in full force and effect.
- 10.2. Assignment. This Agreement and the rights, duties, and obligations hereunder may not be assigned or delegated by any Party without the prior written consent of Company.
- 10.3. Governing Law and Venue. This Agreement shall be governed by the laws of the State of Arizona, without regard to the choice of law provisions thereof. Venue for any dispute arising hereunder shall be any court of competent jurisdiction located in Pima County, Arizona.

- 10.4 Entire Agreement. This Agreement is the final integration of the agreement between the Parties with respect to the matters covered by it and supersedes any prior understanding or agreements, oral or written, with respect thereto.
- 10.5 Counterparts. This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same Agreement.
- 10.6 Titles and Captions. Titles or captions contained in this Agreement are inserted for convenience and for reference only and in no way define, limit, extend, or describe the scope of this Agreement or the intent of any provision hereof.
- 10.7 Expenses and Attorney's Fees. In the event of a breach or threatened breach of any term or provision of this Agreement, the non-breaching party shall be entitled to all of its remedies available at law or in equity, unless otherwise limited in this Agreement, and in addition shall be entitled to be reimbursed for all of its reasonable costs and expenses in enforcing this Agreement (if successful), including, but not limited to, reasonable attorney's fees. This section shall survive termination or expiration of this Agreement for any reason.
- 10.8 Force Majeure. Neither Party shall be liable to the other for failure to perform its obligations hereunder to the extent such failure results from causes beyond its reasonable control, including strikes, climatic conditions, acts of God, governmental laws, regulations, orders or requirements, interruptions of power or unavailability of equipment or supplies.
- 10.9 Customer Sale of Premises. In the event Customer sells the Premises where the Customer installed the Customer System, Customer's successor-in-interest shall expressly assume all of Customer's obligations hereunder in writing, and this Agreement shall not be affected, nor shall Company's rights hereunder be disturbed in any way, including, without limitation, Company's continued right to all Renewable Energy Credits assigned pursuant to Section 4 hereunder.
- 10.10 Notices. All notices under this Agreement shall be in writing and shall be given to the Parties thereto by personal service (including receipted confirmed facsimile), or by certified or registered mail, return receipt requested, or by recognized overnight courier service, to the Parties at the addresses set forth below. All notices shall be deemed given upon the actual receipt thereof.

Company:

Tucson Electric Power Company
PO Box 711
Tucson, Arizona 85702
Fax: (520) 918-8350
Attn: Renewable Energy & Energy Efficiency Group

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of February 22, 2010.

TUCSON ELECTRIC POWER COMPANY

By: _____

Title: _____



CUSTOMER

By: _____

Print Name: Viktor Peter Polivka

Address:

4675 S. MADISON RD

LOT # 82

TUCSON ARIZONA 85730

Phone: 520-308-7308

TO BE FILLED OUT BY UTILITY

Estimated Capacity Reserved: _____ kWh

Estimated Funding Reserved: \$ _____

Date Reserved: FEB 22 2010

Application Process
ATTACHMENT A
Off-Grid Residential Solar System Qualifications

All off-grid residential solar Customer Systems must meet the following system and installation requirements to qualify for Tucson Electric Power Company's ("TEP" or the "Company") Renewable Energy Credit Purchase Program. Capitalized terms not defined herein shall have the meanings ascribed to them in the Renewable Energy Credit Purchase Program Agreement.

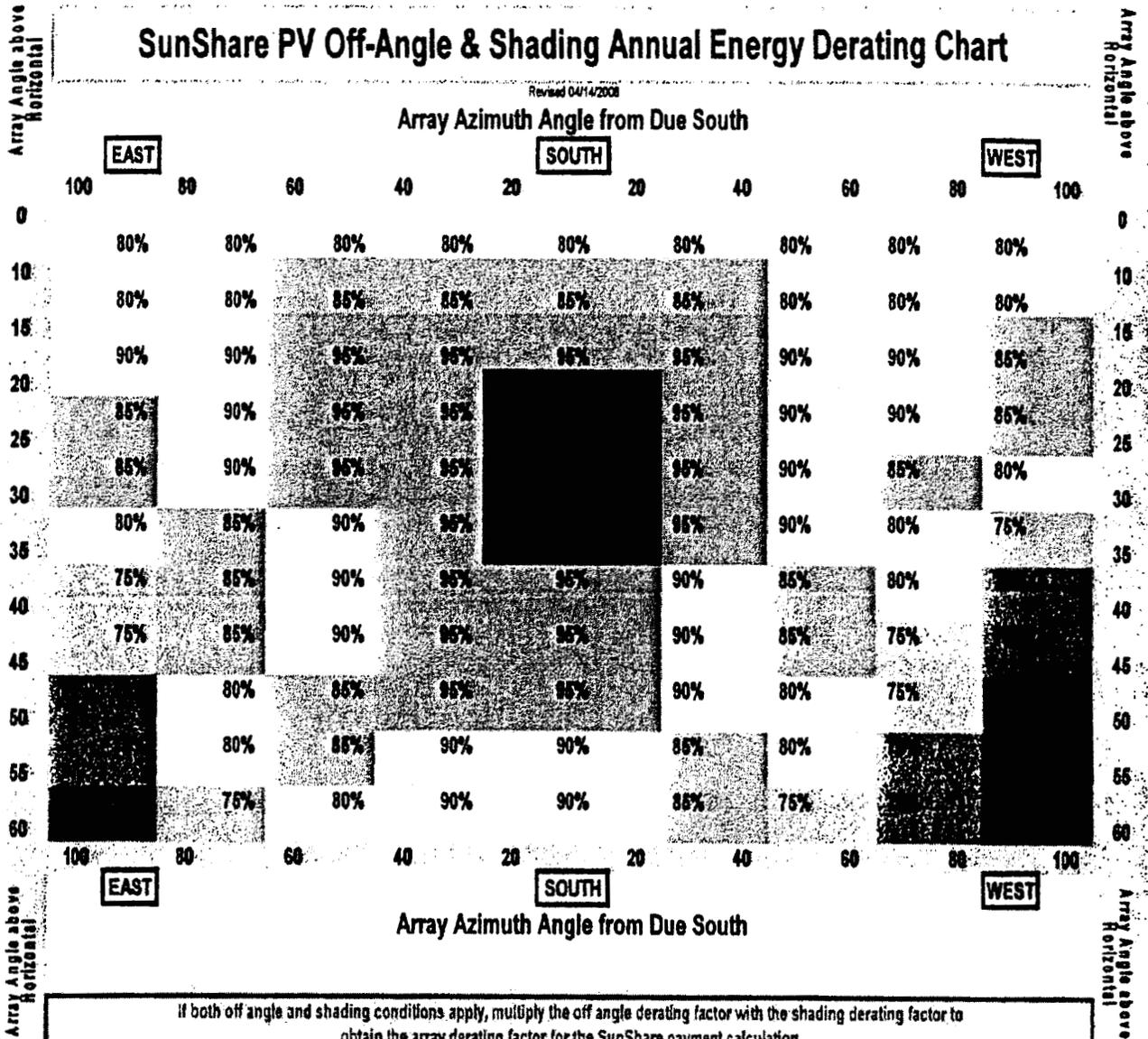
1. All systems shall be installed with a horizontal tilt angle between 10 degrees and 60 degrees, and an azimuth angle of +/- 100 degrees of due south. Installation configurations for some systems receiving a UFI will not be eligible for the full RECPD incentive. The reduction will be determined by the TEP developed de-rating chart, Attachment B of this document, and as discussed further in this report under the section titled Conforming Project Incentives.
2. Qualifying systems using Building Integrated Photovoltaic (BIPV) modules of total array capacity of 5 kWDC or less shall receive 90% of the UFI incentive value for PV systems listed in Attachment A. Systems using BIPV module of total array capacity of greater than 5 kWDC shall only receive a PBI.
3. Photovoltaic modules must be covered by a manufacturer's warranty of at least 20 years.
4. Inverters must be covered by a manufacturer's warranty of at least ten years to receive a UFI and at least five years to receive a PBI.
5. The minimum PV array size shall be no less than 600 Wdc and the maximum PV array size shall not exceed 2,000 Wdc.
6. All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of UL 1703.
7. Off-grid systems will not be metered. Compliance reporting production will be based on an annual 20% capacity factor using nameplate DC rating for capacity.
8. All other electrical components must be UL listed.

9. The Customer System design and installation must meet all requirements of the latest edition of the National Electrical Code, including Article 690 and all grounding, conductor, raceway, overcurrent protection, disconnect and labeling requirements.
10. The Customer System and installation must meet the requirements of all federal, state and local building codes and have been successfully inspected by the building official having jurisdiction. Accordingly, the installation must be completed in accordance with the requirements of the latest edition of National Electrical Code in effect in the jurisdiction where the installation is being completed (NEC), including, without limitation, Sections 200-6, 210-6, 230-70, 240-3, 250-26, 250-50, 250-122, all of Article 690 pertaining to Solar Photovoltaic Systems, thereof, all as amended and superseded.
11. The Customer System must meet Company and Arizona Corporation Commission interconnection requirements for self-generation equipment.
12. The Customer System installation must meet the TEP Service Requirements 2000 Edition, Page 1.20, as follows:

"AN AC DISCONNECT MEANS SHALL BE PROVIDED ON ALL UNGROUNDED AC CONDUCTORS and SHALL CONSIST OF A LOCKABLE GANG OPERATED DISCONNECT CLEARLY INDICATING OPEN OR CLOSED. THE SWITCH SHALL BE VISUALLY INSPECTED TO DETERMINE THAT THE SWITCH IS OPEN. THE SWITCH SHALL BE CLEARLY LABELED STATING "DG SERVICE DISCONNECT."

13. Installation must have been made after January 1, 1997.
14. All Customer System installations must be completed in a professional, workmanlike and safe manner.

ATTACHMENT B



If both off angle and shading conditions apply, multiply the off angle derating factor with the shading derating factor to obtain the array derating factor for the SunShare payment calculation.

| | | | | | | | | | | |
|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Maximum Morning Shaded Hours | 1 | 0 | 2 | 1 | 2 | 2 | 0 | 0 | 0 | 0 |
| Maximum Evening Shaded Hours | 1 | 2 | 0 | 2 | 1 | 2 | 3 | 0 | 0 | 0 |
| Percentage of Annual Energy = | 95% | 90% | 90% | 85% | 85% | 75% | 75% | 75% | 75% | 75% |

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EXHIBIT 4

EXHIBIT
Tep-4
tabbles

Dear Mr. Polivka:

Tucson Electric Power Company (TEP) is in receipt of both the On-Grid and Off-Grid Residential Solar Applications for 4675 S. Harrison Road, Tucson, AZ, dated stamped February 22, 2010.

As you are aware, the referenced system was installed prior to utility review and approval. Additionally the system is a battery back-up which does not meet TEP's requirements as outlined on page 1-10 of the Renewable Energy Credit Purchase Program (see attachment) which specifically states, "Storage Batteries are not allowed as part of the Customer System unless the inverter is a separate component and TEP can locate the Solar Meter at the inverter's output. If configured otherwise, battery losses will adversely reflect in the annual AC metered energy output. Customer's solar energy generation and energy storage system must meet the requirements of 2 and 3 of this Attachment A."

After discussion between myself and our department engineer, Chris Lindsey, a site visit was conducted to determine that the system would not back feed into the TEP grid during an outage. A department decision was made to offer the compromise of allowing your system to be considered "off-grid" because requirements 2 and 3 referenced above were met wherein allowing us some leeway to pay an incentive based on considering this to be an off-grid system.

It is understood that your service from TEP is now totally disconnected. Referenced on Page 1-11 under *Additional requirements for Off-Grid Systems*, "The maximum Solar Electric array size for customers currently paying into the REST tariff shall not exceed 4,000 Wac. For customers not currently paying into the REST tariff, systems shall not exceed 2,000 Wac." Your system exceeds the 2,000 Wac requirement.

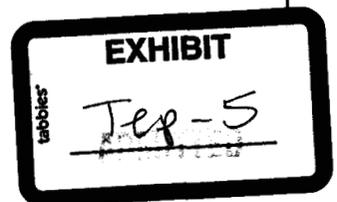
Taking into consideration the size of your system – incenting up to 2857 Wdc of a self installed system, TEP is able to pay an incentive of \$4,000.

If you'll respond via e-mail in agreement to this incentive, I would be more than happy to process an incentive for you

Blanka Anderson
REST/Residential Coordinator

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EXHIBIT 5



From: Viktor Peter [mailto:ppolivka1@cox.net]
Sent: Thursday, May 13, 2010 10:40 PM
To: Lindsey, Christopher
Cc: ACC
Subject: RE: Inspection report

Dear Mr. Lindsey: On 04/09/2010 @ 8:00AM, you came to my home --as per appointment -- to inspect the solar system I've installed and was seeking TEP approval -- Apparently, you have issued a "Report of the Inspection" -- since I received a Email, dated 05/03/2010 at 12:12PM from Andrea Lucero, TEP representative, who referred to a "TEP Inspection that she had, and advised me that I need to "contact a TEP authorized installer" so as to "correct the defects" on my Solar system, so I could receive a TEP approval. I replied to Ms Lucero and requested a copy, so as to know what is the "problem with my Solar system" that you reported to the company...

You indeed, did come into my home and looked around, but in fact "did not inspect anything in my presence inside the home. You merely, checked the meter stand, to see if I was "transmitting any current to the Grid". You did not even go up the roof, just to see the installation, nor to measure the angle the modules were set at...

The failure to provide with the report, I then must assume that you came to my home UNDER FALSE PRETENCES" to gain access into my home. If that is the case, I'll have to report this incident to the Tucson Police as a Unauthorized entry or criminal trespass? Then, proceed with what ever that complaint will demand. I'll give you 2 days to "produce such Inspection Report", if one indeed was written, since it is my legal right to "see what you reported" to TEP, in writing!

To gain entry into a home with false pretences, is not even allowed by LAW from the Police, much less a utility. I know you mentioned, that TEP is indeed a Monopoly and that TEP can set the rules as they see fit. I do not believe that that entering a private residence, under "so called official business" is -- just to look around -- is not within the realm of the Monopolies privileges" as I understand the LAW in a free society.....

Hoping to hear from you in the very near future, and hopefully you'll send me the requested copy of the Report, if indeed there is one.. If not, I'll proceed with the criminal portion and see what the courts have to say about it..

Cordially,
Viktor Peter Polivka

Uniform Credit Purchase Program

Renewable Energy Credit Purchase Program

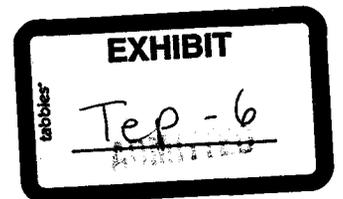


Exhibit 5

Tucson Electric Power Company

Uniform Credit Purchase Program

Renewable Energy Credit Purchase Program

(“RECPP”)

Definition

2010 – 2014

FINAL

Table of Contents

| | |
|--|------|
| Solar Electric: Residential Projects (<20kw) and Small Commercial Projects (<100 kW) | 1-1 |
| Solar Electric: Large Commercial Projects (>100kW)..... | 2-1 |
| Residential and Small Commercial Solar Water Heating and Space Heating..... | 3-1 |
| Solar Water Heating and Space Heating: Large Commercial | 4-1 |
| Ground Source Heat Pumps: Residential and Commercial | 5-1 |
| Wind Systems Smaller Than 1 MW | 6-1 |
| Commercial Solar Daylighting | 7-1 |
| Additional Technologies with Prescriptive Incentives: | 8-1 |
| Technologies without Technology Specific Criteria | 9-1 |
| Non-Conforming Projects..... | 10-1 |
| Appendix 1: Incentive Summary Tables | 11-1 |
| Appendix 2: Glossary of Terms..... | 12-1 |

Residential Projects and Commercial Projects Smaller Than 100 kW

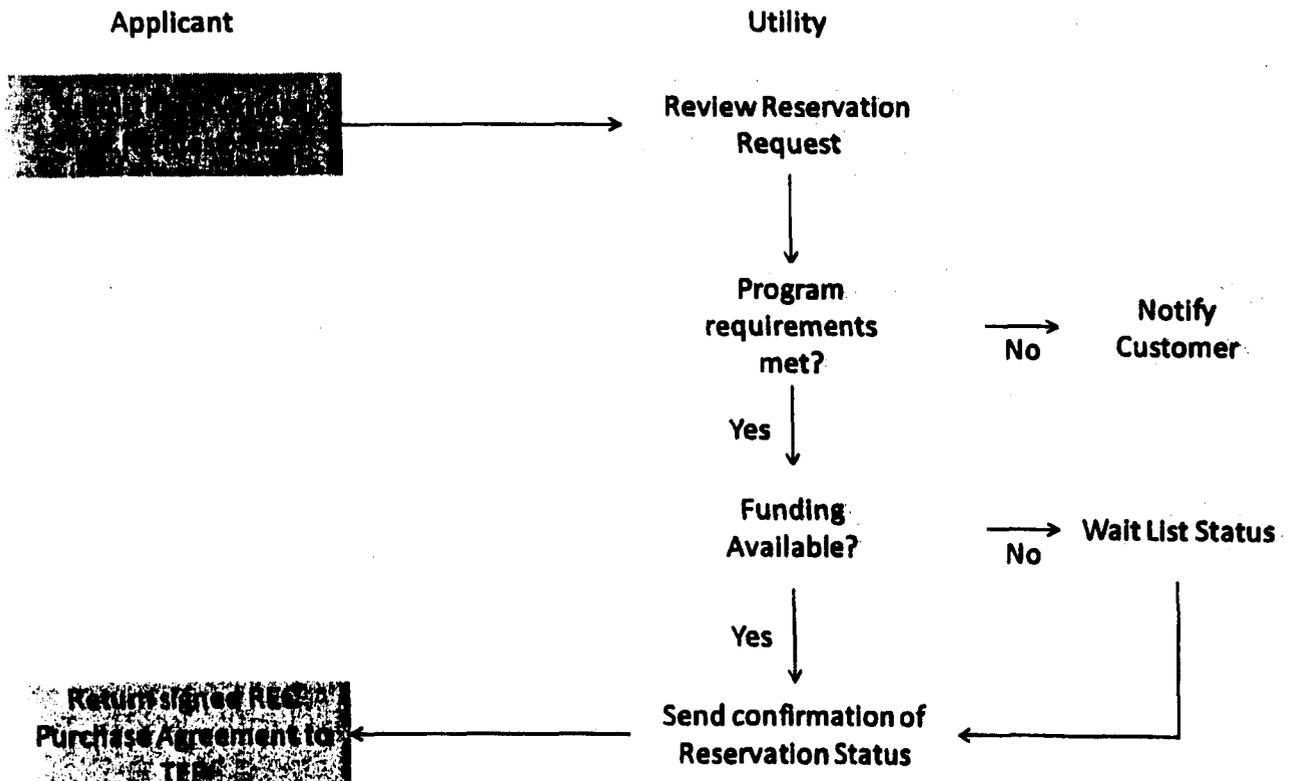
Solar Electric: Residential Projects Smaller Than 20 kW and Commercial Projects Smaller Than 100 kW

Tucson Electric Power Company ("TEP" or the "Company") is committed to assisting our customers in developing their own renewable generation resources, through a balanced and supportive renewable energy distributed generation incentive program. Our goal is to create a program that will provide incentives for affordable, environmentally sensitive, customer-sited renewable energy generation systems to supplement TEP customer's energy needs. A properly designed system, matched to a customer's energy use, will provide a reduction in utility bills through the use of renewable resources. This program reflects our commitment to reduce the cost of developing renewable energy resources.

PROCESS FOR OBTAINING INCENTIVES

The process for obtaining incentives from TEP involves the flow of information between the applicant and TEP. The following sections reflect the typical three-step process.

Step 1 - Reservation Request and Assignment of Reservation Status



The applicant must first submit the reservation request to TEP.¹ The reservation request includes information about the TEP customer on whose property the system will be located, the Solar Electric system, the calculation of the incentive, and the installer of the system.

¹ Off-grid projects would submit a different version of the reservation request.

Residential Projects and Commercial Projects Smaller Than 100 kW

TEP will review the reservation request to ensure the application conforms to program requirements.

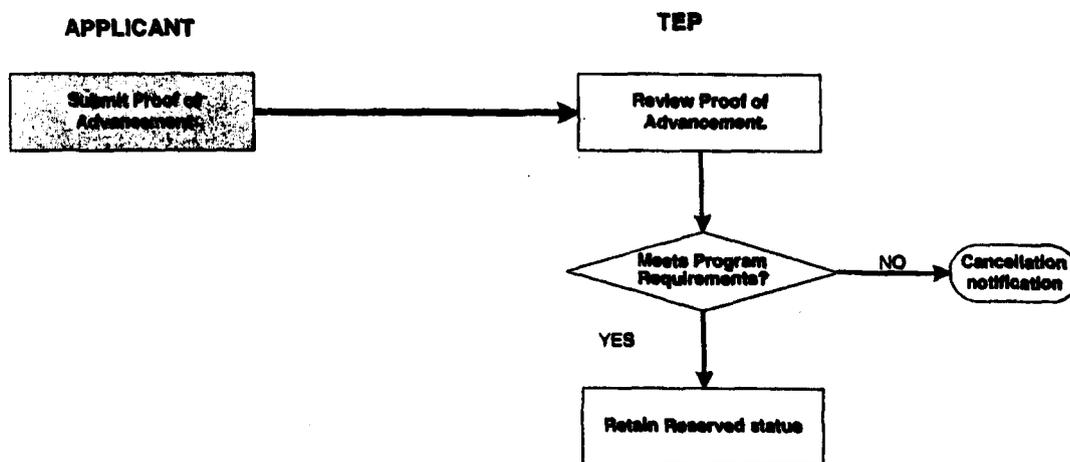
- Reservation requests for residential systems and commercial systems smaller than 100 kW are processed on a first-come, first-served basis.
- Reservation requests for residential systems and commercial systems smaller than 100 kW will be reviewed within 30 days of the utility's receipt of the request.

If the reservation request is approved, TEP will send a confirmation to the applicant. A reservation request may be denied for two different reasons, each with its own consequences:

- The reservation request may be denied because the request is not in compliance with program requirements. In this case, TEP will send notification to the applicant of the discrepancies and put the reservation in a "pending" status. The installer will have 14 days to provide the documentation required.
- The reservation request may be denied because it is not in conformance with program requirements. In this case, TEP will send notice that the request is cancelled.
- The reservation request may be denied because funding is not available. In this case, TEP will send a notification to the applicant that the request will be placed on a waiting list.

After reviewing the reservation request, TEP will assign a reservation status.

Step 2 – Proof of Advancement



Applicants for residential systems and commercial systems smaller than 100 kW must submit proof of project advancement to TEP within 60 days of the date of reservation confirmation from TEP to retain the reservation. Applicants for residential systems and commercial systems smaller than 100 kW must provide copies of city/county inspection permits to TEP as documentation of the proof of project advancement. If those permits are not available within 60 days of the date of reservation confirmation, the applicant may also provide these documents in place of the permits:

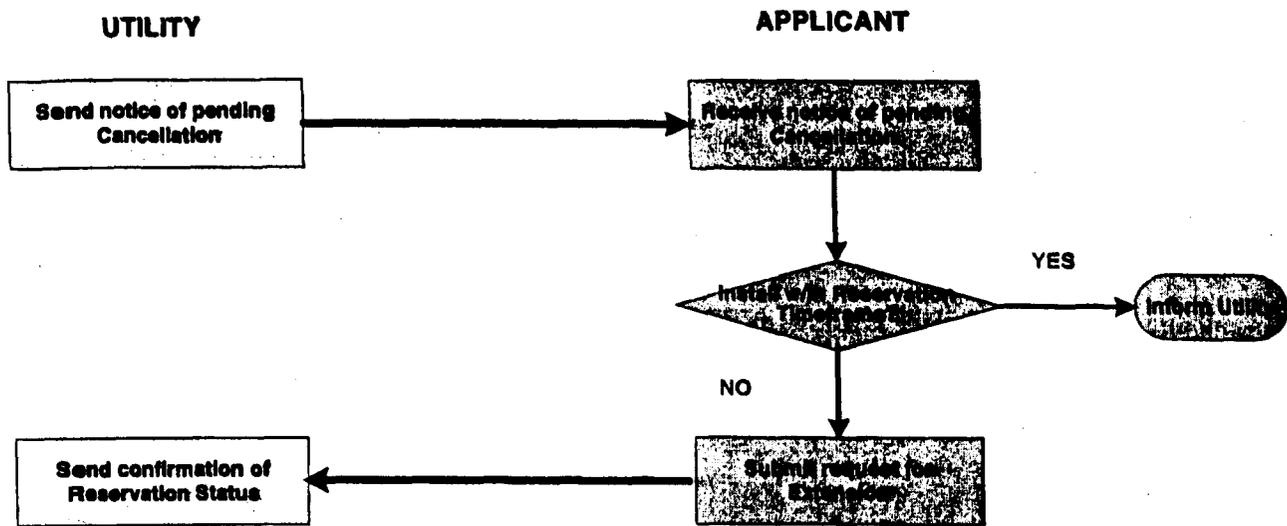
- Signed agreement
- Assignment of Payment form

Residential Projects and Commercial Projects Smaller Than 100 kW

- Initial city/county-permit application or actual receipt of final acceptance inspection paperwork from the city/county.

If proof of project advancement is not received within the specified timeframe, the applicant will be notified that the reservation is cancelled. The applicant has the option to reapply for funding after the reservation has been cancelled. The request will be processed in the same manner as a new project reservation and will be contingent upon availability of funding at the time the new application is received.

Conditional Step – Extension / Cancellation

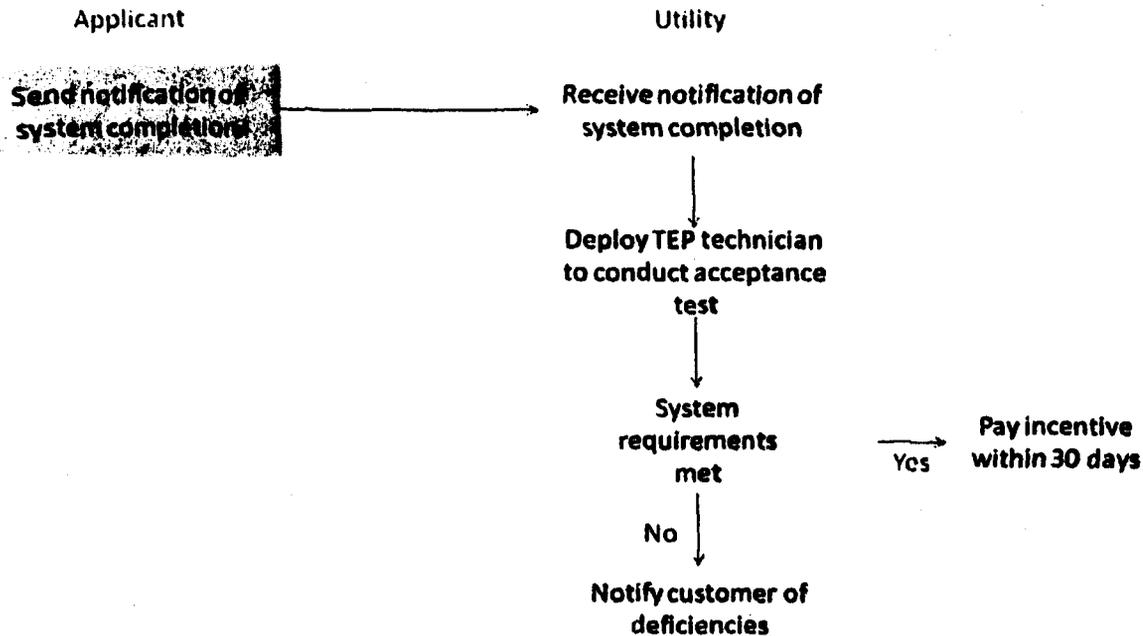


If all project requirements are not met within 180 days of the date of the reservation confirmation, the applicant must apply for an extension to remain eligible for the incentive. TEP will trigger this request for extension with a notice of the pending cancellation 30 days prior to the date of scheduled cancellation. TEP will grant an extension for up to 90 days following timely receipt of a customer's request for extension. TEP may approve written extension requests detailing the conditions for delay for periods beyond 90 days under extenuating circumstances.

If all program requirements have not been met within the reservation timeframe, a reservation request will be cancelled unless an extension is granted.

Residential Projects and Commercial Projects Smaller Than 100 kW

Step 3 – Customer Requests Payment



Upon project completion, the customer must notify TEP that the system has been placed in service. This should be done by submitting a copy of the city/county final inspection permit. When TEP receives notification that the system is complete, TEP will perform an "acceptance test." The acceptance test requires that a TEP inspector test the system's compliance with the required specifications and its performance and determine that it is in line with TEP requirements.

If the system meets TEP specifications and performance requirements, TEP will pay the customer the up-front incentive ("UFI") within 30 days of the acceptance test. If the system fails to meet TEP specifications and performance requirements, TEP will notify the customer within 5 days of the acceptance test. The customer will then have 30 days to address the deficiencies and notify TEP that the system is ready to be retested.

INCENTIVE LEVELS FOR RESIDENTIAL SOLAR ELECTRIC SYSTEMS AND COMMERCIAL SYSTEMS SMALLER THAN 100 kW

Residential Solar Electric systems and non-residential systems smaller than 100 kW are eligible for UFIs. UFIs are those incentives where the customer receives a one-time payment based on the system's designed capacity.

Table 1 identifies the incentives available for residential Solar Electric systems and non-residential Solar Electric systems smaller than 100 kW.

Residential Projects and Commercial Projects Smaller Than 100 kW

Table 1. Up-Front Incentives (\$/Watt) for On-Grid Residential Solar Electric Systems and OnGrid Non-Residential Solar Electric Systems Smaller Than 100 kW, and Off-Grid.

| Year | Residential | Small-Commercial | Off-Grid |
|-------|-------------|------------------|----------|
| 2010 | \$3.00/W DC | \$2.50 | \$2.00 |
| 2011* | \$3.00/W DC | \$2.50 | \$2.00 |
| 2012* | \$3.00/W DC | \$2.50 | \$2.00 |
| 2013* | \$3.00/W DC | \$2.50 | \$2.00 |
| 2014* | \$3.00/W DC | \$2.50 | \$2.00 |

Notes:

*Indicates that the incentive for that year has not yet been approved by the Arizona Corporation Commission ("ACC" or the "Commission"). As such, these incentives are tentative and may change pending Commission approval.

- On-Grid Residential customers will receive a UFI up to a cap of 20 kWac. If a residential system is installed larger than 20 kWac, TEP will only provide an incentive payment for the first 20 kWac.
- On-Grid Small commercial customers will receive a UFI up to a cap of 100 kWac. If a small commercial system is installed larger than 100 kWac, it must apply under the large commercial program.
- Off-Grid customers, residential or commercial, will receive a UFI up to a cap of 4 kWac.
- The UFI may not exceed 60% of total System Cost.
- The customer must pay at least 15% of the project cost, after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.
- As described later in this document, these incentive levels may be decreased because of sub-optimal system positioning.

The incentive amount will be calculated at the time the application is approved for reservation. If federal or state incentives change during the period of time after the reservation approval, the incentive amount reserved will not be changed as long as the reservation is not cancelled.

In return for TEP's payment of a UFI, TEP will be given complete and irrevocable ownership of the RECs until December 31st of the 20th full calendar year after completion of installation of the system. Operational life during that time frame must be supported by system warranty or planned maintenance schedules.

PROJECT FUNDING

Funds will be made available for reservations on a first-come, first-reserved basis, until annual funding is fully reserved. Reservations which are rejected as a result of insufficient funds will be placed on a waiting list and offered the opportunity to retain their original reservation date for one additional quarter without the need to resubmit application documentation. If the incentive level has changed from the date of the original reservation to the date when the reservation is approved, the new incentive level shall be applied.

Residential Projects and Commercial Projects Smaller Than 100 kW

NET METERING

RECPP incentives can be applied to systems designed to serve only the typical load of the customer with whom the incentive agreement has been established. The assessment of that typical load does not preclude the periodic production of electricity in excess of the customer's demand. All projects must comply with ACC net metering rules.

PROJECT REQUIREMENTS AFTER INSTALLATION

After completing the installation of a residential Solar Electric project or commercial Solar Electric project smaller than 100 kW, the customer must continue to provide information to TEP about the system's performance.

All customer systems receiving renewable energy self-generation incentives are obligated to include a TEP-supplied production meter, which will report system production to TEP in accordance with the regular meter-reading schedule. TEP, at its option, may perform periodic inspection of the system for operation, metered production, and reporting purposes.

THE FINE PRINT

In addition to the other requirements described in this hand book, there are three other types of program details of which system owners and installers should be aware:

1. Installer qualifications
2. Customer-installed systems
3. System removal

These are described in further detail below.

Installer Qualifications

All systems receiving incentives under the RECPP must be installed by a qualified installer. The following requirements must be submitted by the applicant as part of the reservation request. TEP will verify that the installer meets the following minimum qualifications prior to confirming a reservation request:

1. The installer must possess a valid license on file with the Arizona Registrar of Contractors ("AZROC") with a license classification appropriate for the technology being installed. Alternatively, the installer must identify use of a contractor holding an appropriate license on file with the AZROC for the technology being installed. A copy of the AZROC license must be provided as part of the reservation request.
2. The installer must possess an Arizona business license that is active and in good standing.

Installers may request that the above information be retained on file with TEP; however, under this option the installer must certify that the information on file remains current with the submission of each reservation request. Information on file must be renewed yearly.

Residential Projects and Commercial Projects Smaller Than 100 kW

Installations by Customer (Residential Solar Electric and Wind Only)

Residential customers may self-install Solar Electric systems 10 kWac or smaller providing they adhere to all applicable codes and standards. The customer-installed systems are eligible for an incentive equal to 70% of the standard UFI, as otherwise listed in Table 1, above. TEP reserves the right to withdraw this self-install qualification condition at any time in the future if TEP finds self-installations are not adhering to the applicable codes and standards or are found to be of poor quality workmanship.

System Removal

If receiving a UFI, neither the Qualifying System nor any components thereof shall be removed from the premises (by either the applicant or future owners or occupants of the property) until December 31st of the 20th full calendar year following completion of system installation of the renewable energy system, without express agreement of TEP. If the Qualifying System is removed by any party in violation of this provision, customer shall immediately reimburse TEP all incentive amounts paid by TEP to customer or on behalf of customer to an authorized third party.

In addition, if a Qualified System is removed, TEP shall monitor that specific customer site to ensure that an additional incentive is not provided for any new distributed renewable energy resource system on that site until the Renewable Energy Credit ("REC") contracted operational life of the original system has been completed.

ADDITIONAL RESOURCES

The following resources provide information regarding system installation and performance forecasting:

The California Energy Commission's Guide to Buying a Photovoltaic Solar Electric System at http://energy.ca.gov/reports/2003-03-11_500-03-014F.PDF

The Arizona Consumers Guide to Buying a Solar Electric System at www.azsolarcenter.com/design/azguide-1.pdf

Residential Projects and Commercial Projects Smaller Than 100 kW

ATTACHMENT A **System Qualifications for Residential Solar Electric Projects and** **Commercial Solar Electric Projects Smaller Than 100 kWac**

All solar electric generating Customer Systems must meet the following system and installation requirements to qualify for Tucson Electric Power Company's ("TEP" or the "Company") Renewable Energy Credit Purchase Program ("RECPP"). Capitalized terms not defined herein shall have the meanings ascribed to them in the RECPP Agreement.

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement, which is in conflict with a site-specific governmental requirement, shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Equipment Standards

1. The Customer System components must be certified as meeting the requirements of IEEE-929 - Recommended Practice for Utility Interface of Photovoltaic Systems.²
2. The Customer System components must be certified as meeting the requirements of UL-1741 - Power Conditioning Units for use in Residential Photovoltaic Power and be covered by a non-prorated manufacturer's warranty of at least two years.
3. Photovoltaic components must be certified by a nationally recognized testing laboratory as meeting the requirements of UL-1703 - Standard for Flat Plate Photovoltaic Modules and Panels Systems and be covered by a non-prorated manufacturer's warranty of at least 20 years.
4. The inverter must be certified as meeting the requirements of IEEE-1547 - Recommended Practice for Utility Interface of Photovoltaic Systems, and it must be UL-1741 certified. Inverters must be covered by a manufacturer's warranty of at least ten years.

² Some technology-specific criteria reference third party standards. The requirements of those standards are fully applicable when referenced as part of technology specific criteria. TEP recognizes that new standards are likely to develop in the near future for technologies included in the RECPP, and recommends that the new standards are examined for application in this program definition as they become available.

Residential Projects and Commercial Projects Smaller Than 100 kW

5. The Customer System design and installation must meet all requirements of the latest edition of the National Electrical Code, including Article 690 and all grounding, conductor, raceway, over-current protection, disconnect and labeling requirements.
6. All other electrical components must be UL listed.
7. The Customer System and installation must meet the requirements of all federal, state and local building codes and have been successfully inspected by the building official having jurisdiction. Accordingly, the installation must be completed in accordance with the requirements of the latest edition of National Electrical Code in effect in the jurisdiction where the installation is being completed (NEC), including, without limitation, Sections 200-6, 210-6, 230-70, 240-3, 250-26, 250-50, 250-122, all of Article 690 pertaining to Solar Photovoltaic Systems, thereof, all as amended and superseded.
8. The Customer System must meet Company and Arizona Corporation Commission interconnection requirements for self-generation equipment.
See <http://images.edocket.azcc.gov/docketpdf/0000074361.pdf> for these requirements.

Installation requirements

1. A grid-connected Residential Customer System must have a total solar array nameplate rating of at least 1,200 watts DC and no more than 20,000 watts AC.
2. The Customer System installation must meet the TEP Service Requirements 2000 Edition, Page 1.20, as follows:

“AN AC DISCONNECT MEANS SHALL BE PROVIDED ON ALL UNGROUNDED AC CONDUCTORS and SHALL CONSIST OF A LOCKABLE GANG OPERATED DISCONNECT CLEARLY INDICATING OPEN OR CLOSED. THE SWITCH SHALL BE VISUALLY INSPECTED TO DETERMINE THAT THE SWITCH IS OPEN. THE SWITCH SHALL BE CLEARLY LABELED STATING “DG SERVICE DISCONNECT.”
3. The utility meter and utility disconnect will be installed in a location readily accessible by TEP during normal business hours.
4. Products must be installed according to manufacturers' recommendations.
5. The Customer System photovoltaic panels and modules must face within +/- 100 degrees of true south, and be substantially unshaded from 9 am to 3 pm. System arrays which are facing at an azimuth angle of more than 20 degrees from true south or shaded for more than one hour per day will be subject to a reduced amount of buydown payment per Attachment B.
6. The Customer System photovoltaic panels and modules must be fitted at an angle of 0 degrees to 60 degrees from horizontal. System arrays which are fitted with an elevation angle of less than 20 degrees or more than 35 degrees above horizontal will be subject to a reduced amount of buydown payment per Attachment B.

Residential Projects and Commercial Projects Smaller Than 100 kW

7. For Residential Customer Systems, Company will provide a meter and meter socket that will be installed in a readily accessible outdoor location by the Customer between the DC to AC converter and the connection to the over-current device in the Customer's electric service panel. For Non-Residential Customer Systems, Company shall provide the meter only, to be installed in a Customer supplied meter socket to be installed in a readily accessible outdoor location by the Customer between the DC to AC converter and the connection to the over-current device in the Customer's electric service panel. Installer must notify TEP of wiring configuration so that TEP may provide the appropriate 3-phase meter.
8. Total voltage drop on the DC and AC wiring from the furthest PV module to the AC meter will not exceed 2%.
9. PV panels and DC to AC inverter will be installed with sufficient clearance to allow for proper ventilation and cooling. At a minimum, manufacturer clearance recommendations will be observed. PV modules may be mounted less than 4 inches above any surface and an additional inch of clearance for each foot of continuous array surface area beyond four feet in the direction parallel to the mounting support surface, only in cases when arrays are flush-mounted to roof pitch. Otherwise, the four-inch spacing and an additional inch of clearance for each foot of continuous array surface area minimum is required.
10. Storage Batteries are not allowed as part of the Customer System unless the inverter is a separate component and TEP can locate the Solar Meter at the inverter's output. If configured otherwise, battery losses will adversely reflect in the annual AC metered energy output. Customer's solar energy generation and energy storage system must meet the requirements of 2 and 3 of this Attachment A.
11. The DC to AC inverter used must provide maximum power point tracking for the full voltage and current range expected from the photovoltaic panels used and the temperature and solar insolation conditions expected in Tucson, Arizona.
12. The DC to AC inverter must be capable of adjusting to "sun splash" from all possible combinations of cloud fringe effects without interruption of electric production.
13. TEP reserves the right to modify standards as technology changes on a case by case basis, pending independent laboratory analysis, Professional Engineer ("PE") stamp, or TEP engineering analysis.

General Requirements

1. All Customer System installations must be completed in a professional, workmanlike and safe manner.
2. Installation must have been made after January 1, 1997.

Residential Projects and Commercial Projects Smaller Than 100 kW

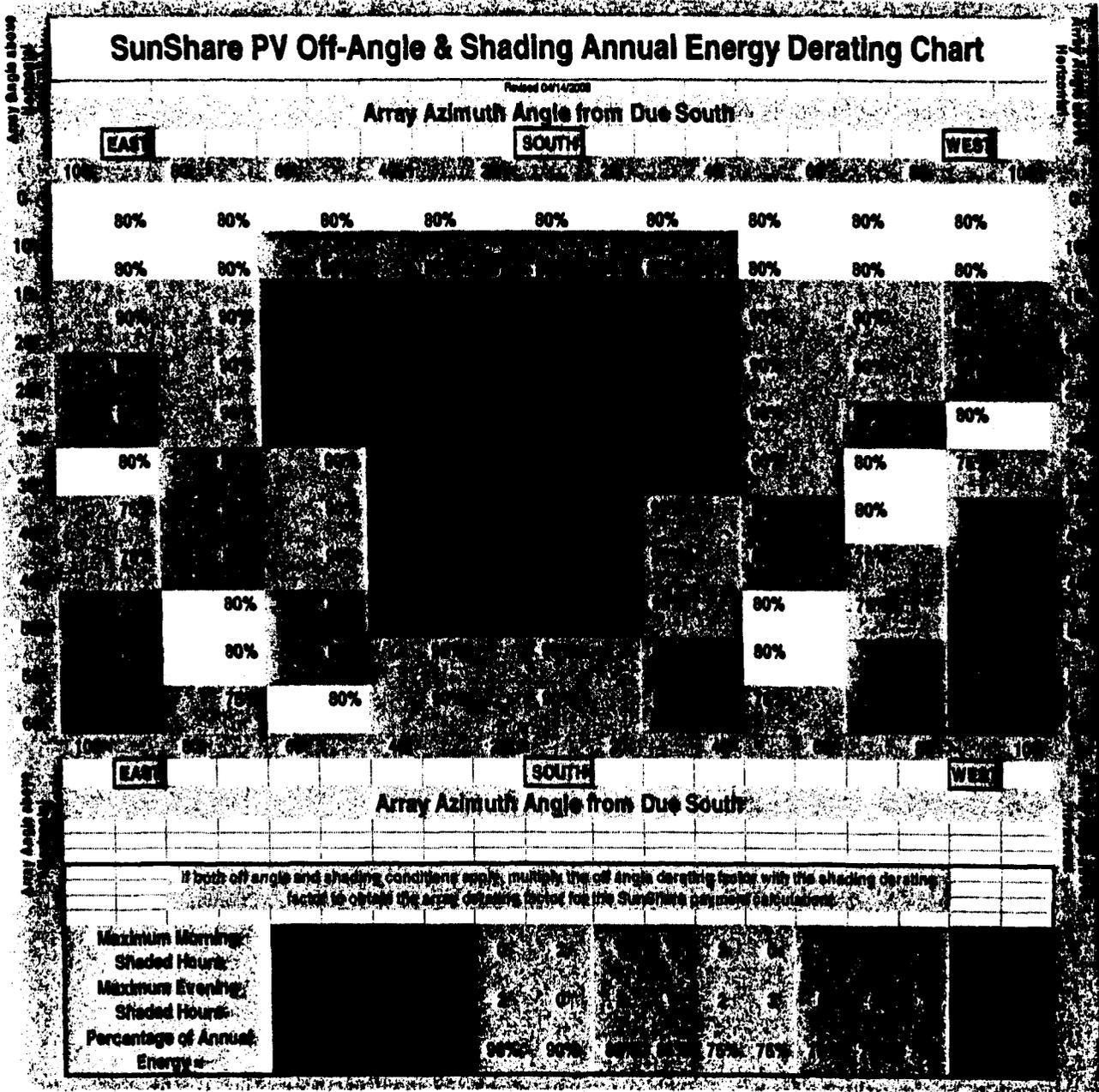
3. The Customer must be connected to the Company's electric grid, except for approved off-grid systems in conformance with the RECPP.
4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale.
5. The project must comply with applicable local, state, and federal regulations.
6. Products must be installed according to manufacturers' recommendations.
7. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.
8. All major system components must be new and must not have been previously placed in service in any other location or for any other application.
9. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production. Certain other non-electric renewable energy production systems will require customer supplied metering for Performance Based Incentive ("PBI") payment calculation purposes.
10. PV system components shall be properly labeled, including AC & DC disconnects (if present), solar generation meter, service panel (outside cover), and breakers inside the service panel.
11. The system will in all cases have a material and full labor warranty of at least five years.

Additional Requirements for Off-Grid Systems

1. The minimum Solar Electric array size shall be no less than 600 Wdc. The maximum Solar Electric array size for customers currently paying into the REST tariff shall not exceed 4,000 Wac. For customers not currently paying into the REST tariff, systems shall not exceed 2,000 Wac.
2. Off-grid systems will not be metered. Compliance reporting production will be based on an annual 20% capacity factor using nameplate DC rating for capacity.

Residential Projects and Commercial Projects Smaller Than 100 kW

ATTACHMENT B
SunShare Solar Electric Off-Angle & Shading Annual Energy Derating Chart



Qualifying systems using Building Integrated Photovoltaic (BIPV) modules of total array capacity of 5 kWdc or less shall receive 90% of the UFI incentive value for PV systems listed in Attachment A. Systems using BIPV modules of total array capacity of greater than 5 kWdc shall be derated based on heating unless the applicant can demonstrate optimal performance.

Non-Residential Projects Larger Than 100 kW

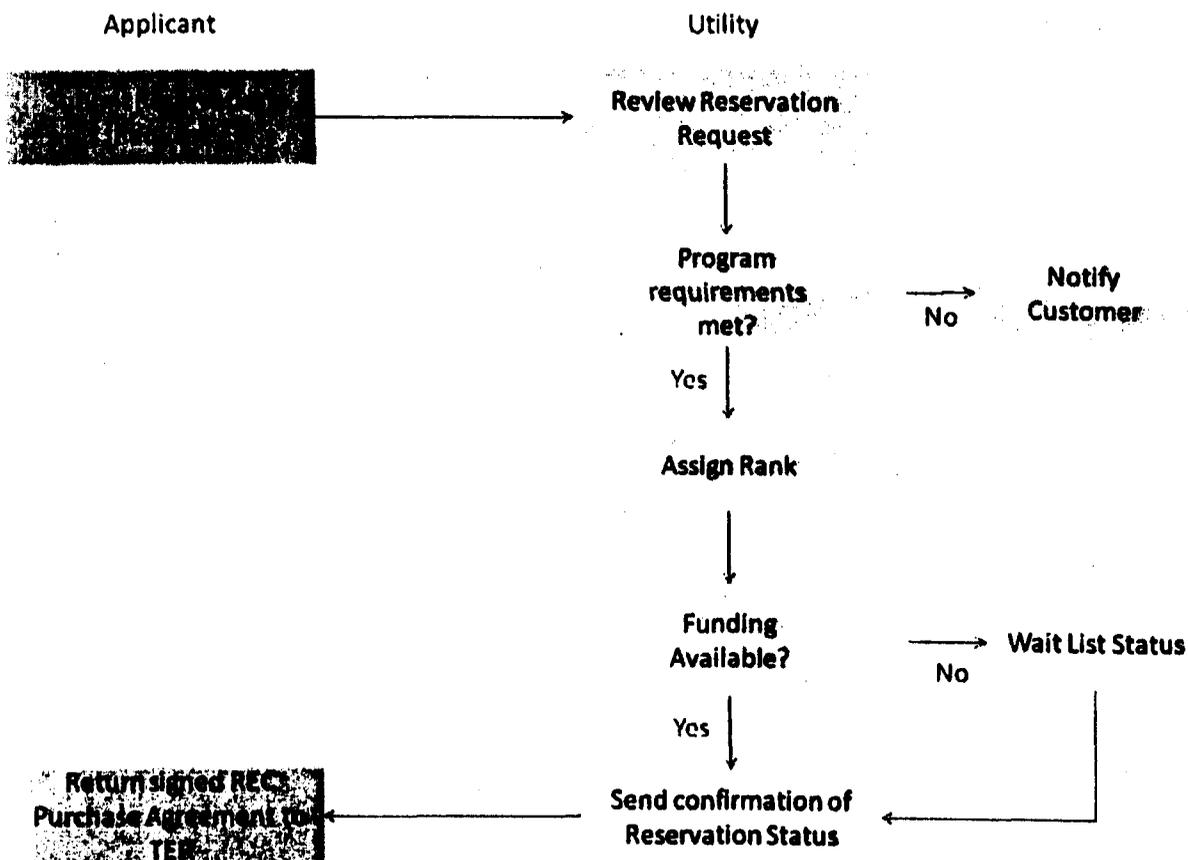
Solar Electric: Non-Residential Projects Larger Than 100 kW

Tucson Electric Power Company ("TEP" or the "Company") is committed to assisting our customers in developing their own renewable generation resources, through a balanced and supportive renewable energy distributed generation incentive program. Our goal is to create a program that will provide incentives for affordable, environmentally sensitive, customer-sited renewable energy generation systems to supplement TEP customer's energy needs. A properly designed system, matched to a customer's energy use, will provide a reduction in utility bills through the use of renewable resources. This program reflects our commitment to reduce the cost of developing renewable energy resources.

PROCESS FOR OBTAINING INCENTIVES

The process for obtaining incentives from TEP involves the flow of information between the applicant and TEP. The following sections reflect the typical five-step process.

Step 1 – Reservation Request and Assignment of Reservation Status



Non-Residential Projects Larger Than 100 kW

The applicant must first submit the reservation request to TEP.³ The reservation request includes information about the TEP customer on whose property the system will be located, the Solar Electric system, the calculation of the incentive, and the installer of the system.

TEP will review the reservation request within 90 days of receipt of the request to ensure the application conforms to program requirements.

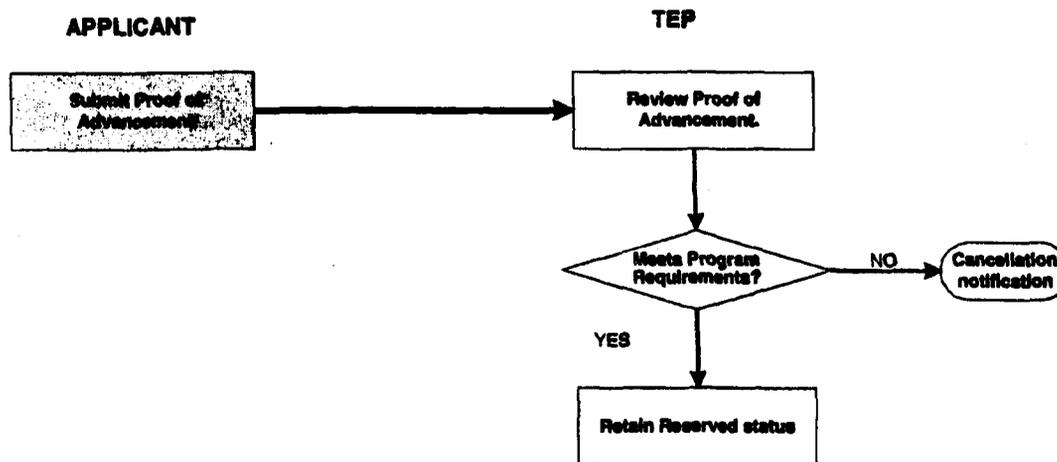
- Reservation requests for non-residential systems larger than 100 kW are assigned a rank based on the lowest expected life cycle credit purchase cost and likelihood of construction.
- In the event of a tie in the ranking, when the program would be fully subscribed if both projects were given reservation status, funds will be awarded based on the date of receipt of the completed reservation request.

If the reservation request is approved, TEP will send a confirmation to the applicant. A reservation request may be denied for two different reasons, each with its own consequences:

- The reservation request may be denied because it is not in conformance with program requirements. In this case, TEP will send notice that the request is cancelled.
- The reservation request may be denied because funding is not available. In this case, TEP will send a notification to the applicant that the request will be placed on a waiting list.

After reviewing the reservation request, TEP will assign a reservation status.

Step 2 – Proof of Advancement



Applicants for non-residential systems larger than 100 kW must submit proof of project advancement to TEP within 120 days of the date of reservation confirmation from TEP to retain the reservation. The Proof of Project Advancement documentation for a non-residential project larger than 100 kW may include the following:

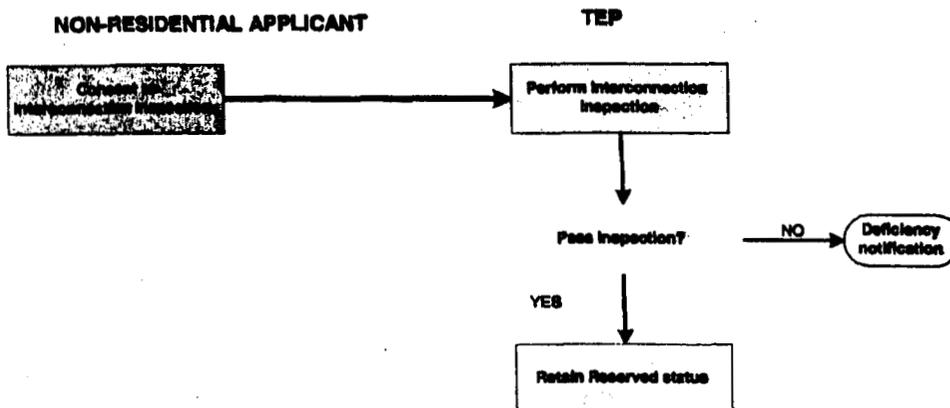
³ Applicants with off-grid projects would submit a different version of the reservation request.

Non-Residential Projects Larger Than 100 kW

- A project agreement (between customer and installer);
- An executed installation agreement including all project participants;
- Building and/or construction permits and/or a full set of design development or construction drawings (80% or more complete);
- An executed interconnection agreement (if applicable); and
- A letter from customer committing to utility-accepted in-service date.

If proof of project advancement is not received within the specified timeframe, the customer will be notified that the reservation is cancelled. An appropriate written request for an extension may be requested if circumstances require. The applicant has the option to reapply for funding after the reservation has been cancelled. The request will be processed in the same manner as a new project reservation and will be contingent upon availability of funding at the time the new application is received.

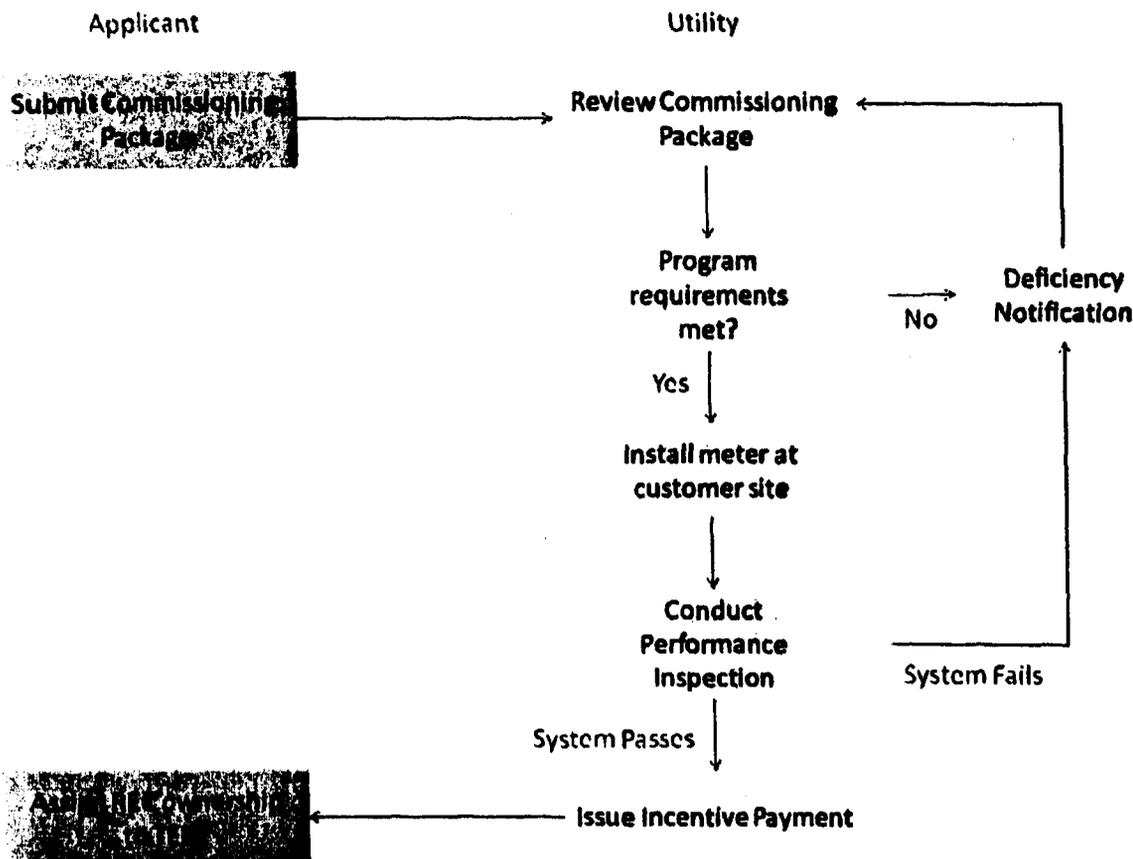
Step 3 – Interconnection Inspection (for Grid-Tied Qualifying Systems with capacity larger than 100 kW)



Non-residential grid-tied qualifying systems of electrical generating capacity larger than 100 kW must submit to and pass an interconnection inspection before the system can be commissioned. TEP conducts the interconnection inspection and will notify the applicant of the results of the inspection. If the system passes the interconnection inspection, the application retains the reservation. The applicant can keep the reservation even if the system fails the initial interconnection inspection, as long as the deficiency is remedied within 120 days from the date of the reservation confirmation, as described in Step 2.

Non-Residential Projects Larger Than 100 kW

Step 4 – System Commissioning For Non-Residential Systems Larger Than 100 kW



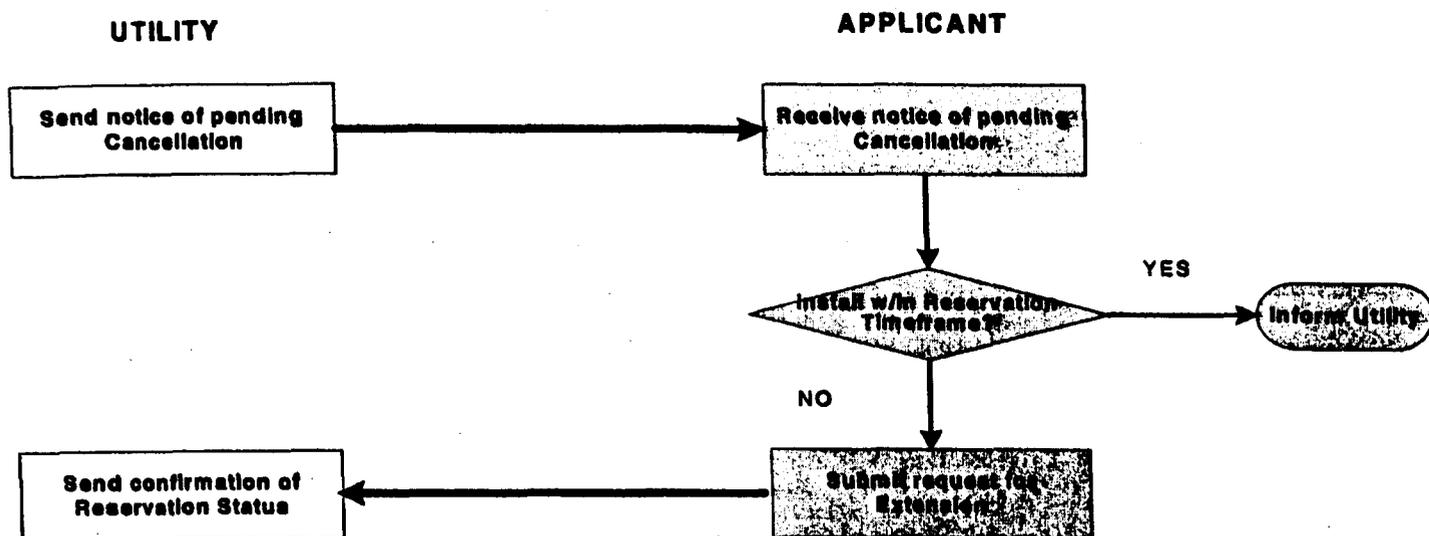
After the Non-Residential system larger than 100 kW has been commissioned, the applicant must submit a commissioning package to TEP. TEP will review the commissioning package and confirm that all program requirements have been met, including passing the interconnection inspection.

After receiving the commissioning package, TEP will dispatch a TEP representative to install the meter at the system site. The meter will be certified according to the TEP standards. The customer must provide access to the site during normal business hours so that the TEP representative can install the meter.

In addition, TEP may, at its discretion, perform a conformance inspection of the system. TEP will notify the applicant of the scheduled conformance inspection and the applicant must make the system available for inspection. In most cases in which a conformance inspection is conducted, an incentive payment may not be issued until after a qualifying system has passed the conformance inspection.

Non-Residential Projects Larger Than 100 kW

Conditional Step – Extension / Cancellation



If all project requirements are not met within 365 days of the date of the reservation confirmation, the applicant must apply for an extension to remain eligible for the incentive. TEP will trigger this request for extension with a notice of the pending cancellation 60 days prior to the date of scheduled cancellation. TEP will grant an extension for up to 90 days following timely receipt of a customer's request for extension. TEP may approve written extension requests detailing the conditions for delay for periods beyond 90 days under extenuating circumstances, or for systems larger than 1 MW.

If all program requirements have not been met within the reservation timeframe, a reservation request will be cancelled unless an extension is granted.

Step 5 – Incentive Payment is Disbursed

Non-residential Solar Electric systems larger than 100 kW are eligible for a performance-based incentive (PBI). All PBI Project Agreements will include the following terms:

1. A project agreement between the applicant(s) and TEP that details the assignment of energy and RECs, and the assignment of payment must be completed before payments can be disbursed.
2. At a minimum, quarterly meter reads will be performed by TEP and quarterly payments will be made to the assigned payee within 30 days of the meter reading based on quarterly kWh production. If the payment due is less than \$25.00, it will be held for the next payment period.
3. PBI payments will begin with the first quarterly production following receipt of the completed system commissioning package and conformance inspection, if required, and continue for the life of the agreement term. As part of this provision, it is understood that systems commissioned mid-quarter will receive payment only for the production of that partial quarter.

TEP's payment of a PBI will assure TEP complete and irrevocable ownership of the REC for the full duration of the PBI agreement. The agreement duration must fully coincide with the PBI payment

Non-Residential Projects Larger Than 100 kW

schedule and the system must be supported by system warranty or planned maintenance schedules for the term of the agreement.

INCENTIVE LEVELS FOR NON-RESIDENTIAL SOLAR ELECTRIC SYSTEMS LARGER THAN 100 KW

Non-residential Solar Electric systems larger than 100 kW are eligible for performance-based incentives ("PBIs"). The PBI allows the customer to collect incentive payments in direct relation to the actual system production. Table 2 identifies the incentives available for non-residential Solar Electric systems larger than 100 kW.

In all cases, incentive values listed in Table 2 are maximum values. PBIs are awarded through a bid process, which is discussed later in this section. Applicants are encouraged to submit bids requesting incentive amounts less than the maximums listed. Bids requesting a lower level of incentive payment than the maximum will have an increased chance of acceptance in the allocation ranking process.

Table 2. Maximum Performance-Based Incentives for Non-Residential Projects Larger Than 100 kW

| Year | Maximum Incentive Levels for Specified REC Agreements of Specified Duration | | |
|-------|---|---------|---------|
| | 10-year | 15-year | 20-year |
| 2010 | 0.182 | 0.168 | 0.162 |
| 2011* | 0.182 | 0.168 | 0.162 |
| 2012* | 0.182 | 0.168 | 0.162 |
| 2013* | 0.182 | 0.168 | 0.162 |
| 2014* | 0.182 | 0.168 | 0.162 |

Notes:

*Indicates that the incentive for that year has not yet been approved by the Arizona Corporation Commission ("ACC" or the "Commission"). As such, these incentives are tentative and may change pending Commission approval.

- There is no incentive cap for non-residential systems other than annual program funding considerations.
- A PBI cannot exceed 60% of the real project costs, defined as the undiscounted total system cost plus acceptable financing charges. Acceptable finance charges are finance charges used for the PBI incentive cap calculation and cannot exceed the current prime interest rate plus 5%. Financing charges must be disclosed as part of the commissioning package, if not disclosed before.
- The customer must pay at least 15% of the project cost (as defined above), after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.

The incentive amount will be calculated at the time the application is approved for reservation. If federal or state incentives change during the period of time after the reservation approval, the incentive amount reserved will not be changed as long as the reservation is not cancelled.

TEP's payment of a PBI will assure TEP complete and irrevocable ownership of the REC for the full duration of the PBI agreement. The agreement duration must fully coincide with the PBI payment

Non-Residential Projects Larger Than 100 kW

schedule and the system must be supported by system warranty or planned maintenance schedules for the term of the agreement.

PROJECT FUNDING

Non-residential funds will be committed as bids are accepted; funds will not be placed in reserve for later in the year. As a result, the budget may be committed before the end of the year. Funds will be made available to projects based on a ranking generated by lowest expected life cycle credit purchase cost, as provided in the application and verified by TEP, as well as likelihood of construction. Projects submitted to the utility for reservation will be ranked based on a calculated index value for purposes of allocating non-residential funds as proposed in the application and verified by TEP. Lowest lifecycle cost projects will be funded first. Indexing of the non-residential projects will be performed based on the verified incentive values and duration of the proposed agreement in the application for that project. In addition, the bid evaluator assesses the likelihood that the project will be completed. Projects with higher incentive payments result in a higher expected life cycle credit purchase cost and projects that produce more kWh result in a lower expected life cycle credit purchase cost. In the event of a tie in the ranking, when the program would be fully subscribed if both projects were given reservation status, funds will be awarded based on the date of receipt of the completed reservation request.

Reservation requests will be reviewed by the utility on a monthly basis. Once reservation requests are fully ranked each month, notification of reservation approvals and rejections will be made in conformance with the rankings and available funding.

Reservations which are rejected as a result of insufficient program funds may elect to carry forward into the next period and retain the original reservation date. The election must be made at the time of the original application.

NET METERING

RECPP incentives can be applied to systems designed to serve only the typical load of the customer with whom the incentive agreement has been established. The assessment of that typical load does not preclude the periodic production of electricity in excess of the customer's demand. All projects must comply with ACC net metering rules.

PROJECT REQUIREMENTS AFTER INSTALLATION

All customer systems receiving renewable energy self-generation incentives are obligated to include a TEP-supplied production meter, which will report system production to TEP in accordance with the regular meter-reading schedule. TEP, at its option, may perform periodic inspection of the system for operation, metered production, and reporting purposes.

Non-Residential Projects Larger Than 100 kW

THE FINE PRINT

In addition to the other requirements described in this hand book, there are two other types of program details of which system owners and installers should be aware:

1. Installer qualifications
2. System removal

These are described in further detail below.

Installer Qualifications

All systems receiving incentives under the RECPP must be installed by a qualified installer. The following requirements must be submitted by the applicant as part of the reservation request. TEP will verify that the installer meets the following minimum qualifications prior to confirming a reservation request:

1. The installer must possess a valid license on file with the Arizona Registrar of Contractors ("AZROC") with a license classification appropriate for the technology being installed. Alternatively, the installer must identify use of a contractor holding an appropriate license on file with the AZROC for the technology being installed. A copy of the AZROC license must be provided as part of the reservation request.
2. The installer must possess an Arizona business license that is active and in good standing.

Installers may request that the above information be retained on file with TEP; however, under this option the installer must certify that the information on file remains current with the submission of each reservation request. Information on file must be renewed yearly.

System Removal

If receiving a PBI, the Qualifying System or any components thereof shall not be removed from the premises until the last day of the final month of the final full calendar year of the applicable incentive payment term in the Agreement following completion of system installation of the renewable energy system, without express agreement from TEP. If the Qualifying System is removed in violation of this provision, customer shall immediately reimburse TEP all incentive amounts paid by TEP to customer or on behalf of customer to an authorized third party.

In addition, if a Qualified System is removed, TEP shall monitor that specific customer site to ensure that an additional incentive is not provided for any new distributed renewable energy resource system on that site until the REC contracted operational life of the original system has been completed.

TEP shall attempt to monitor the number of missing or non-working distributed generation systems and shall summarize its observations in its annual Compliance Report.

Non-Residential Projects Larger Than 100 kW

ATTACHMENT A

Qualifications for Non-Residential Solar Electric Systems Larger Than 100 kWac

All solar electric generating Customer Systems must meet the following system and installation requirements at the time of project commissioning to qualify for Tucson Electric Power Company's ("TEP" or the "Company") Renewable Energy Credit Purchase Program ("RECPP"). Capitalized terms not defined herein shall have the meanings ascribed to them in the RECPP Agreement.

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement which is in conflict with a site-specific governmental requirement shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Equipment Standards

1. The Customer System components must be certified as meeting the requirements of IEEE-929 - Recommended Practice for Utility Interface of Photovoltaic Systems.⁴
2. The Customer System components must be certified as meeting the requirements of UL-1741 - Power Conditioning Units for use in Residential Photovoltaic Power and be covered by a non-prorated manufacturer's warranty of at least two years.
3. Photovoltaic components must be certified by a nationally-recognized testing laboratory as meeting the requirements of UL-1703 - Standard for Flat Plate Photovoltaic Modules and Panels Systems; they must also be covered by a non-prorated manufacturer's warranty of at least 20 years.
4. The Customer System design and installation must meet all requirements of the latest edition of the National Electrical Code, including Article 690 and all grounding, conductor, raceway, over-current protection, disconnect and labeling requirements.

⁴ Some technology-specific criteria reference third party standards. The requirements of those standards are fully applicable when referenced as part of technology specific criteria. TEP recognizes that new standards are likely to develop in the near future for technologies included in the RECPP and recommends that the new standards are examined for application in this program definition as they become available.

Non-Residential Projects Larger Than 100 kW

5. The inverter must be certified as meeting the requirements of IEEE-1547 - Recommended Practice for Utility Interface of Photovoltaic Systems and it must be UL-1741 certified. Inverters must be covered by a manufacturer's warranty of at least ten years.
6. All other electrical components must be UL listed.
7. The Customer System and installation must meet the requirements of all federal, state and local building codes and have been successfully inspected by the building official having jurisdiction. Accordingly, the installation must be completed in accordance with the requirements of the latest edition of National Electrical Code in effect in the jurisdiction where the installation is being completed (NEC), including, without limitation, Sections 200-6, 210-6, 230-70, 240-3, 250-26, 250-50, 250-122, all of Article 690 pertaining to Solar Photovoltaic Systems, thereof, all as amended and superseded.
8. The Customer System must meet Company and Arizona Corporation Commission interconnection requirements for self-generation equipment.
See <http://images.edocket.azcc.gov/docketpdf/0000074361.pdf> for these requirements.

Installation requirements

1. Any Non-Residential Customer System must have a total solar array nameplate rating of more than 1,200 watts DC.
2. The Customer System installation must meet the TEP Service Requirements 2000 Edition, Page 1.20, as follows:

"AN AC DISCONNECT MEANS SHALL BE PROVIDED ON ALL UNGROUNDED AC CONDUCTORS and SHALL CONSIST OF A LOCKABLE GANG OPERATED DISCONNECT CLEARLY INDICATING OPEN OR CLOSED. THE SWITCH SHALL BE VISUALLY INSPECTED TO DETERMINE THAT THE SWITCH IS OPEN. THE SWITCH SHALL BE CLEARLY LABELED STATING "DG SERVICE DISCONNECT."
3. The utility meter and utility disconnect will be installed in a location readily accessible by TEP during normal business hours.
4. Products must be installed according to manufacturers' recommendations.
5. For Non-Residential Customer Systems, Company shall provide the meter only, to be installed in a Customer supplied meter socket to be installed in a readily accessible outdoor location by the Customer between the DC to AC converter and the connection to the over-current device in the Customer's electric service panel.
6. Total voltage drop on the DC and AC wiring from the furthest PV module to the AC meter will not exceed 2%.

Non-Residential Projects Larger Than 100 kW

7. PV panels and DC to AC inverter will be installed with sufficient clearance to allow for proper ventilation and cooling. At a minimum, manufacturer clearance recommendations will be observed. PV modules may be mounted less than 4 inches above any surface and an additional inch of clearance for each foot of continuous array surface area beyond four feet in the direction parallel to the mounting support surface only in cases when arrays are flush-mounted to roof pitch. Otherwise, the four-inch spacing and an additional inch of clearance for each foot of continuous array surface area minimum is required.
8. Storage Batteries are not allowed as part of the Customer System unless the inverter is a separate component and TEP can locate the Solar Meter at the inverter's output. If configured otherwise, battery losses will adversely reflect in the annual AC metered energy output. Customer's solar energy generation and energy storage system must meet the requirements of 1 and 2 under "Equipment Standards" of this Attachment A.
9. The DC to AC inverter used must provide maximum power point tracking for the full voltage and current range expected from the photovoltaic panels used and the temperature and solar insolation conditions expected in Tucson, Arizona.
10. The DC to AC inverter must be capable of adjusting to "sun splash" from all possible combinations of cloud fringe effects without interruption of electric production.

General Requirements

1. All Customer System installations must be completed in a professional, workmanlike and safe manner.
2. Installation must have been made after January 1, 1997.
3. The Customer must be connected to the Company's electric grid, except for approved off-grid systems in conformance with the RECPP.
4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale.
5. All major system components must be new and must not have been previously placed in service in any other location or for any other application.
6. The project must comply with applicable local, state, and federal regulations.
7. Products must be installed according to manufacturers' recommendations.
8. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.
9. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production. Certain other non-electric

Non-Residential Projects Larger Than 100 kW

renewable energy production systems, noted below, will require customer supplied metering for PBI payment calculation purposes.

10. PV system components shall be properly labeled, including AC & DC disconnects (if present), solar generation meter, service panel (outside cover), and breakers inside the service panel.
11. If the qualifying system is grid-tied, the system must meet Arizona Corporation Commission Interconnection Requirements for Self-Generation Equipment. See <http://images.edocket.azcc.gov/docketpdf/0000074361.pdf> for these requirements.
12. The system will in all cases have a material and full labor warranty of at least five years.

Requirements Specific to Non-Residential PV Systems Larger Than 100 kW

1. The Non-Residential Customer System shall be operating, substantially complete and have produced an AC output at least 70% of the total array nameplate DC rating at PTC.⁵
2. Operation, Maintenance and Repair. The Customer shall be solely responsible for the operation, maintenance and repair of the Non-Residential Customer System and any and all costs and expenses associated therewith. Company will notify Customer of all Non-Residential Customer System repairs the Company determines are reasonably necessary to support proper continued electrical production of the Non-Residential Customer System. The Customer will notify the Company within five (5) business days of its receipt of any such Company repair notice if the repair requires the installation of a new inverter and/or PV module. The Customer shall complete any such repair that affects the Non-Residential Customer System performance and does not require the purchase of a new inverter or PV module(s) within five (5) business days of the Company's notice of the need for such repair. For any such repair that does require the purchase and installation of a new inverter and/or PV module, the Customer shall promptly commence and diligently pursue such repair to completion, provided, in no event shall such repair take more than thirty (30) days to complete. At all times while Company is receiving the environmental credits from the Non-Residential Customer System, Customer shall clean all PV modules in the Non-Residential Customer System as necessary to keep them free from foreign material that would visibly obscure the modules, including any dirt and/or oils.
3. Non-Residential Customer System Security. At all times during and after installation of the Non-Residential Customer System, the Customer shall use commercially reasonable efforts to provide adequate security to prevent damage or vandalism to the Non-Residential Customer System.
4. Company shall provide Customer with a revenue grade AC meter to be installed between the Non-Residential Customer System and the grid interconnection. This meter will not be used for

⁵ PTC stands for "PVUSA Test Conditions." These standards are also referenced by the California Energy Commission. PTC conditions are based upon 1,000 W/m² solar irradiance, 20 degrees Celcius ambient temperature, and 1 m/s wind speed.

Non-Residential Projects Larger Than 100 kW

billing, but shall be used for any official Non-Residential Customer System production output data. Company will retain ownership of the meter and be responsible for its repair if needed.

5. Customer shall provide Company with all documentation reasonably requested by Company to demonstrate to the Commission that any environmental credits transferred under the Agreement were derived from an eligible technology, that the kWh generated are accurately reported and that the environmental credits have not expired or been used by any other entity for any purpose.
6. If certified proof cannot be provided of complete galvanic isolation of any and all DC from the AC output of the inverter(s) used in the Non-Residential Customer System through IEEE-1547 certification of the inverter, the Non-Residential Customer System shall include an isolation transformer installed between the inverter(s) and the grid interconnection. The transformer will be rated at full load continuous operation at 50 degrees C. at 125% of nameplate DC array rating and have an efficiency rating at nameplate DC array rating power of at least 98% as tested. The transformer will have at least one tap each of 2.5% and 5% both above and below the nominal voltage tap.

Additional Requirements for Off-Grid Systems

1. The minimum Solar Electric array size shall be no less than 600 Wdc. For customers currently paying into the REST tariff the maximum Solar Electric array size shall not exceed 4,000 Wac. For customers currently not paying into the REST tariff, the maximum Solar Electric array size shall not exceed 2,000 Wac.
2. Off-grid systems will not be metered. Compliance reporting production will be based on an annual 20% capacity factor using nameplate DC rating for capacity.

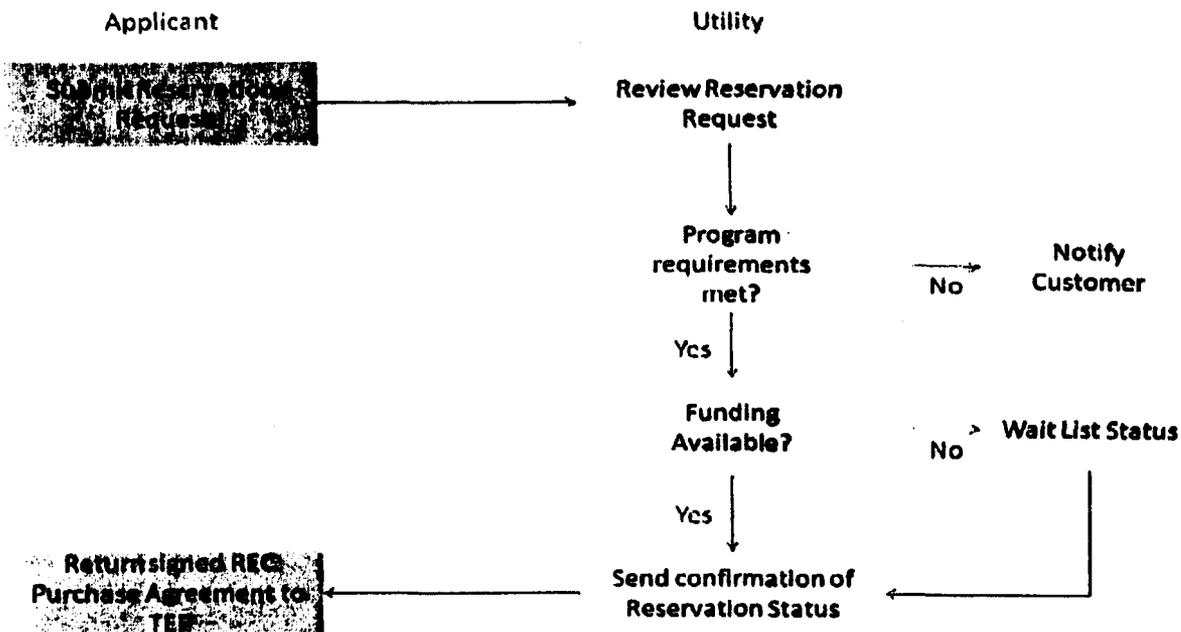
Residential and Small Commercial Solar Water Heating and Space Heating Smaller than 35,000 kWh Equivalent Annual Production per Year

Tucson Electric Power Company ("TEP" or the "Company") is committed to assisting our customers in developing their own renewable generation resources, through a balanced and supportive renewable energy distributed generation incentive program. Our goal is to create a program that will provide incentives for affordable, environmentally sensitive, customer-sited renewable energy generation systems to supplement TEP customer's energy needs. A properly designed system, matched to a customer's energy use, will provide a reduction in utility bills through the use of renewable resources. This program reflects our commitment to reduce the cost of developing renewable energy resources.

PROCESS FOR OBTAINING INCENTIVES

The process for obtaining incentives from TEP involves the flow of information between the applicant and TEP. The following sections reflect the typical three-step process.

Step 1 – Reservation Request and Assignment of Reservation Status



The applicant must first submit the reservation request to TEP. The reservation request includes information about the TEP customer on whose property the system will be located, the system, the calculation of the incentive, and the installer of the system.

TEP will review the reservation request to ensure the application conforms to program requirements.

- Reservation requests for residential systems and small commercial systems with output smaller than a 35,000 kWh equivalent are processed on a first-come, first-reserved basis.

Solar Water Heating and Space Heating: Residential and Small Commercial

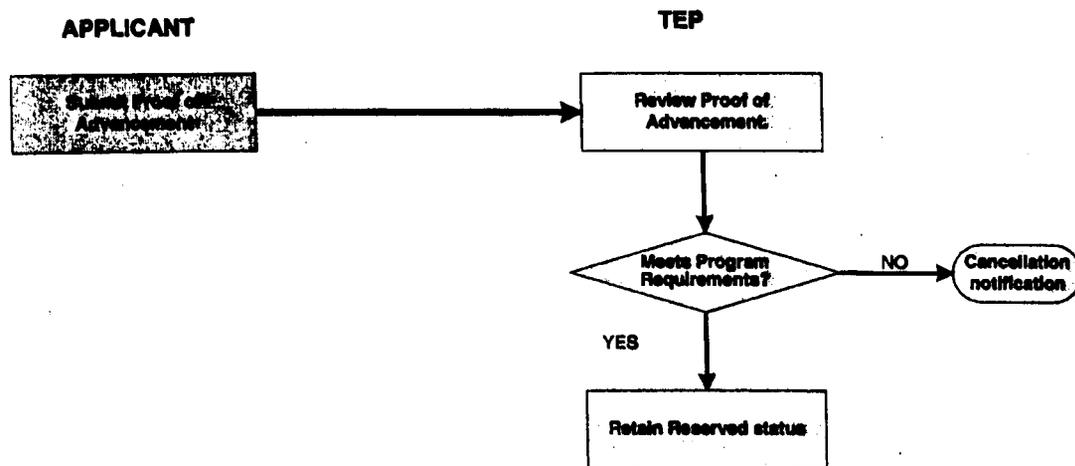
- Reservation requests for residential systems and commercial systems with output smaller than a 35,000 kWh equivalent will be reviewed within 30 days of the utility's receipt of the request.

If the reservation request is approved, TEP will send a confirmation to the applicant. A reservation request may be denied for two different reasons, each with its own consequences:

- The reservation request may be denied because it is not in conformance with program requirements. In this case, TEP will send notice that the request is cancelled.
- The reservation request may be denied because funding is not available. In this case, TEP will send a notification to the applicant that the request will be placed on a waiting list.

After reviewing the reservation request, TEP will assign a reservation status.

Step 2 – Proof of Advancement



Applicants for residential systems and commercial systems with annual output smaller than a 35,000 kWh equivalent must submit proof of project advancement to TEP within 60 days of the date of reservation confirmation from TEP to retain the reservation. Applicants for residential systems and commercial systems with output smaller than a 35,000 kWh equivalent must provide copies of city/county inspection permits to TEP as documentation of the proof of project advancement. If those permits are not available within 60 days of the date of reservation confirmation, the applicant may also provide these documents in place of the permits:

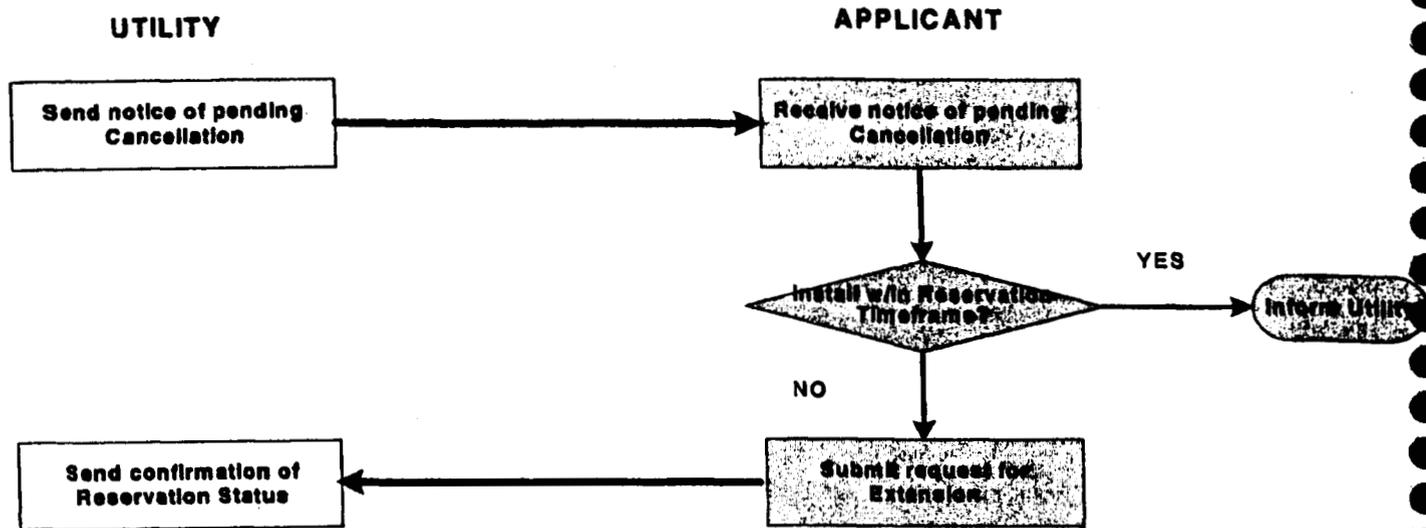
- Signed agreement
- Assignment of Payment form
- Initial city/county permit application or actual receipt of final acceptance inspection paperwork from the city/county.

If proof of project advancement is not received within the specified timeframe, the applicant will be notified that the reservation is cancelled. The applicant has the option to reapply for funding after the reservation has been cancelled. The request will be processed in the same manner as a new project

Solar Water Heating and Space Heating: Residential and Small Commercial

reservation and will be contingent upon availability of funding at the time the new application is received.

Conditional Step - Extension / Cancellation

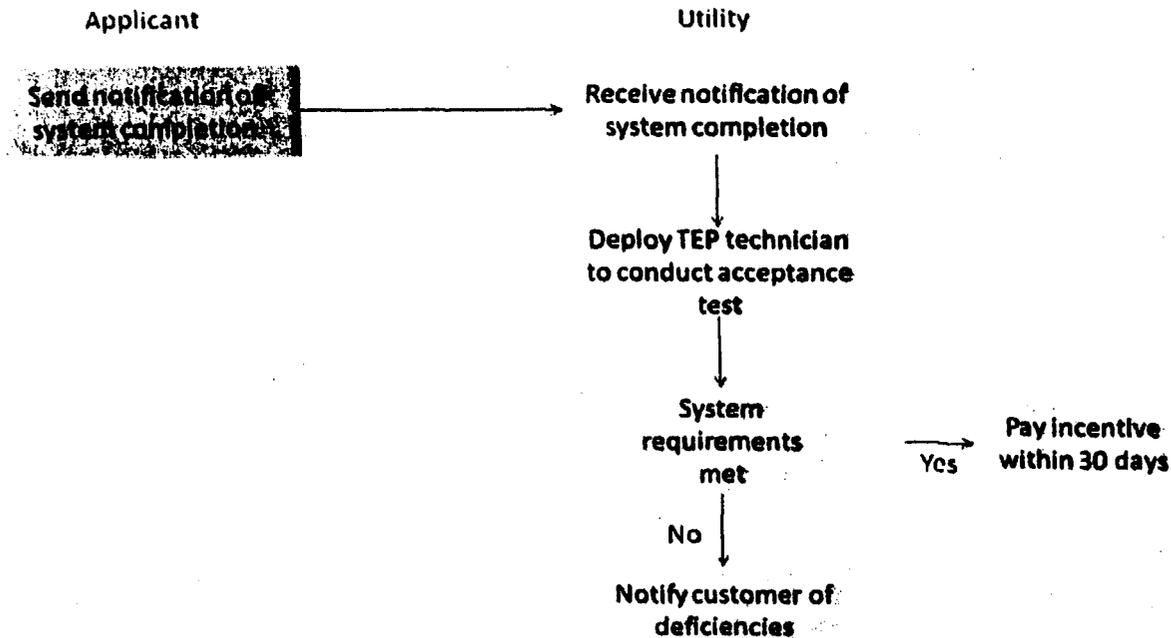


If all project requirements are not met within 180 days of the date of the reservation confirmation, the applicant must apply for an extension to remain eligible for the incentive. TEP will trigger this request for extension with a notice of the pending cancellation 30 days prior to the date of scheduled cancellation. TEP will grant an extension for up to 90 days following timely receipt of a customer's request for extension. TEP may approve written extension requests detailing the conditions for delay for periods beyond 90 days under extenuating circumstances.

If all program requirements have not been met within the reservation timeframe, a reservation request will be cancelled unless an extension is granted.

Solar Water Heating and Space Heating: Residential and Small Commercial

Step 3 – Customer Requests Payment



Upon project completion, the customer must notify TEP that the system has been placed in service. This should be done by submitting a copy of the city/county final inspection permit. When TEP receives notification that the system is complete, TEP will perform an "acceptance test." The acceptance test requires that a TEP inspector test the system's compliance with the required specifications and its performance and determine that it is in line with TEP requirements.

If the system meets TEP specifications and performance requirements, TEP will pay the customer the UFI within 30 days of the acceptance test. If the system fails to meet TEP specifications and performance requirements, TEP will notify the customer within 5 days of the acceptance test. The customer will then have 30 days to address the deficiencies and notify TEP that the system is ready to be retested.

INCENTIVE LEVELS FOR RESIDENTIAL AND SMALL COMMERCIAL SOLAR WATER HEATING AND SPACE HEATING SYSTEMS

Solar water heating and space heating in residential and small commercial applications are eligible for up-front incentives ("UFIs"). UFIs are those incentives where the customer receives a one-time payment based on the system's designed capacity. Table 3 identifies the incentives available for residential and small commercial solar water heating and space heating systems.

Solar Water Heating and Space Heating: Residential and Small Commercial

Table 3. Incentives for Residential and Small Commercial Solar Water Heating and Space Heating

| Year | Residential Incentive Level** | Small Commercial Incentive Level** |
|-------|-------------------------------------|--------------------------------------|
| 2010 | \$750 plus \$0.25/kWh (max \$1,750) | \$750 plus \$0.50/kWh (max \$17,500) |
| 2011* | \$750 plus \$0.25/kWh (max \$1,750) | \$750 plus \$0.50/kWh (max \$17,500) |
| 2012* | \$750 plus \$0.25/kWh (max \$1,750) | \$750 plus \$0.50/kWh (max \$17,500) |
| 2013* | \$750 plus \$0.25/kWh (max \$1,750) | \$750 plus \$0.50/kWh (max \$17,500) |
| 2014* | \$750 plus \$0.25/kWh (max \$1,750) | \$750 plus \$0.50/kWh (max \$17,500) |

Notes:

*Indicates that the incentive for that year has not yet been approved by the Arizona Corporation Commission ("ACC" or the "Commission"). As such, these incentives are tentative and may change pending ACC approval.

**Indicates estimated annual kWh production in first year.

Energy savings rating is based on the SRCC OG-300 published rating or the TEP-RECPP Space Heating Calculator. Rate applies to forecast/measured first year energy savings only.

- Small commercial customers will receive a UFI up to a collector system size with output smaller than a 35,000 kWh equivalent. If a small commercial system is installed beyond that threshold, it must apply under the large commercial program.
- The UFI may not exceed 60% of total System Cost.
- The customer must pay at least 15% of the project cost, after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.
- TEP has adopted a standardized calculation method to support solar space heating system sizing and incentive payment. The display page of the spreadsheet calculation is presented in Attachment B.
- The bid evaluator reserves the right to award incentives to solar thermal projects other than those that meet the specifications outlined in Attachment A. In these cases, the system output must be less than or equivalent to 35,000 kWh per year. Incentives in these cases will be determined by the bid evaluator. C:\Users\jpater\AppData\Roaming\Microsoft\Word\Insert link here

The incentive amount will be calculated at the time the application is approved for reservation. If federal or state incentives change during the period of time after the reservation approval, the incentive amount reserved will not be changed as long as the reservation is not cancelled.

In return for TEP's payment of a UFI, TEP will be given complete and irrevocable ownership of the RECs until December 31st of the 20th full calendar year after completion of installation of the system. Operational life during that time frame must be supported by system warranty or planned maintenance schedules.

PROJECT FUNDING

Funds will be made available for reservations on a first-come, first-served basis, until annual funding is reserved. Reservations which are rejected as a result of insufficient funds will be placed on a waiting list and offered the opportunity to retain their original reservation date for one additional quarter without the need to resubmit application documentation. If the incentive level has changed from the date of the original reservation to the date when the reservation is approved, the new incentive level shall be applied.

Solar Water Heating and Space Heating: Residential and Small Commercial

THE FINE PRINT

In addition to the other requirements described in this hand book, there are two other types of program details of which system owners and installers should be aware:

1. Installer qualifications
2. System removal

These are described in further detail below.

Installer Qualifications

All systems receiving incentives under the RECPP must be installed by a qualified installer. The following requirements must be submitted by the applicant as part of the reservation request. TEP will verify that the installer meets the following minimum qualifications prior to confirming a reservation request:

1. The installer must possess a valid license on file with the Arizona Registrar of Contractors ("AZROC") with a license classification appropriate for the technology being installed. Alternatively, the installer must identify use of a contractor holding an appropriate license on file with the AZROC for the technology being installed. A copy of the AZROC license must be provided as part of the reservation request.
2. The installer must possess an Arizona business license that is active and in good standing.

Installers may request that the above information be retained on file with TEP; however, under this option the installer must certify that the information on file remains current with the submission of each reservation request. Information on file must be renewed yearly.

System Removal

If receiving a UFI, neither the Qualifying System nor any components thereof shall be removed from the premises (by either the applicant or future owners or occupants of the property) until December 31st of the 20th full calendar year following completion of system installation of the renewable energy system, without express agreement of TEP. If the Qualifying System is removed by any party in violation of this provision, customer shall immediately reimburse TEP all incentive amounts paid by TEP to customer or on behalf of customer to an authorized third party.

In addition, if a Qualified System is removed, TEP shall monitor that specific customer site to ensure that an additional incentive is not provided for any new distributed renewable energy resource system on that site until the REC contracted operational life of the original system has been completed.

TEP shall attempt to monitor the number of missing or non-working distributed generation systems and shall summarize its observations in its annual Compliance Report.

Solar Water Heating and Space Heating: Residential and Small Commercial

Attachment A Qualifications for Residential Solar Water Heating and Space Heating

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement which is in conflict with a site-specific governmental requirement shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Equipment Specifications

1. Domestic Solar Water Heating systems will be rated by the SRCC and meet the OG-300 system standard. Systems that include OG-100 collectors, but are not certified under OG-300, will need to be verified by submitting either a testing certification for a substantially similar system prepared by a publicly funded laboratory or by submitting an engineering report stamped by a registered third-party professional engineer detailing annual energy savings. Solar Space Heating systems will utilize OG-100 collectors.
2. Solar Space Heating systems will be sized in conformance with the Solar Space Heating Incentive Calculation Procedure (Attachment B.) Compliance reporting production will be based on the design energy savings submitted at time of application.
3. Active, open-loop systems are not eligible for RECPP incentives except for active, open-loop systems that have a proven technology or design that limits scaling and internal corrosion of system piping, and includes appropriate automatic methods for freeze protection and prevents stagnation temperatures that exceed 250 degrees Fahrenheit ("F"). under all conditions at the location of installation. Details disclosing conformance with this exception shall be submitted as part of the manufacturer's verification documentation.
4. The 'high' limit on all Domestic Water Heating controllers shall be set no higher than 160 degrees F.
5. Active thermal storage for solar space heating systems shall use water as the storage element.
6. Contractors must provide a minimum of a five year equipment warranty as provided by the system manufacturer, including a minimum warranty period of five years for repair/replacement service to the customer.
7. Domestic Water Heating systems that are installed as an addition to an existing system or are submitted as a customer designed system or not certified to OG-300 must be specifically reviewed and approved by the utility.
8. The solar collector, heat exchangers, and storage elements shall have an equipment warranty of at least 5 years to qualify for a UFI and at least five years to qualify either for a UFI or for a PBI.

Solar Water Heating and Space Heating: Residential and Small Commercial

Installation Guidance

1. The system shall be installed with a horizontal tilt angle between 20 degrees and 60 degrees (40 and 60 degrees for space heating applications), and an azimuth angle of +/- 60 degrees of due south (+/- 20 degrees for space heating applications). It is recommended that collectors be positioned for optimum winter heating conditions at a minimum tilt angle of 45 degrees above horizontal, or as recommended by the manufacturer for the specific collector type and geographic location of installation. Azimuth or tilt angles outside these parameters may be reviewed and approved by the utility, at their discretion.
2. All systems should be installed such that the energy collection system is substantially unshaded and should have substantially unobstructed exposure to direct sunlight between the hours of 9:00 a.m. and 3:00 p.m. Solar Hot Water de-rating chart (see Attachment C and D in this section) may be used to adjust incentive level based upon affected output due to shading.
3. Heat exchange fluid in glycol systems should be tested, flushed and refilled with new fluid as necessary or at a minimum every five years or sooner per manufacturer's recommendations.
4. It is recommended that the anode rod be checked and replaced per manufacturer's recommendations, but no less frequently than every five years.
5. It is recommended that the system design include a timer, switch, and a temperature sensor on the backup element of the storage tank.
6. The collectors and storage tank should be in close proximity to the backup system and house distribution system to avoid excessive pressure or temperature losses.
7. It is recommended that in areas where water quality problems are reported to have reduced the expected life of a solar water heater, that a water quality test is performed for each residence to screen for materials that through interaction with the materials of the proposed solar water heating system may reduce the expected operational life of the system components. The customer should consider contacting the manufacturer to determine if warranty or operational life will be affected.
8. In areas subject to snow accumulation, sufficient clearance will be provided to allow a 12" snowfall to be shed from a solar collector without shadowing any part of the collector.
9. Ball valves shall be used throughout the system. Gate valves shall not be used in any new installation systems.
10. Pipes carrying heated fluids shall be insulated for thermal energy conservation as well as personnel protection when exposed to ambient conditions, although this is highly recommended in either situation.
11. TEP reserves the right to modify standards as technology changes on a case by case basis, pending independent laboratory analysis, Professional Engineer ("PE") stamp, or TEP engineering analysis.

General Requirements

1. The project must comply with applicable local, state, and federal regulations.
2. Products must be installed according to manufacturers' recommendations.
3. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.
4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale on new installations.

Solar Water Heating and Space Heating: Residential and Small Commercial

5. All major system components must be new and must not have been previously placed in service in any other location or for any other application.
6. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production. Certain other non-electric renewable energy production systems, noted below, will require customer supplied metering for PBI payment calculation purposes.
7. If the qualifying system is grid-tied, the system must meet Arizona Corporation Commission . Interconnection Requirements for Self-Generation Equipment. For these requirements, see ACC Decision Number 69674 located at <http://images.edocket.azcc.gov/docketpdf/0000074361.pdf>
8. Existing systems that are replacing major components may submitted and reviewed by the utility for the retrofit category of the program's incentive.

Solar Water Heating and Space Heating: Residential and Small Commercial

Attachment B Solar Space Heating UFI Incentive Calculation Procedure

TEP has adopted a standardized calculation method to support system sizing and incentive payment. The display page of the spreadsheet calculation is presented in Attachment B.

The solar space heating incentive calculation does not suggest or imply that a full energy audit is required to qualify for the solar space heating incentive. The intent is that industry professionals can utilize the calculation tool to aid in facilitating sound system design.

The effective use of the solar space heating incentive calculation is contingent on a Building Design Review. The Building Design Review calculations, inputs and outputs will be determined and specified as part of the reservation request. It is noted that stakeholder acceptance of the proposed calculation tool is conditioned on the future development of standardized design tools, potentially including input tables and charts.

TEP believes that the proposed approach reflects sound design principles and uses inputs which should be available to professionals in this industry segment. TEP does, however, recognize that the approach used in the standardized calculation is not currently universally applied. TEP proposes that continuing efforts be made to develop standard input charts and tables to increase the efficiency of the method's application. In addition, it is the expectation of TEP that the standard calculation can, in most instances, be implemented by practitioners in the solar space heating industry. TEP supports industry collaborative efforts to increase technical knowledge development in this specific area.

Solar Water Heating and Space Heating: Residential and Small Commercial

Solar Space Heating UFI Incentive Calculation Procedure.

In Advance, please perform the Design Review and Utility Bill Review (if Applicable) for numbers to enter in Steps #1, #2 and #6.

| Min Elevation | Max Elevation | Heating Season Days | Daily Panel Heat Output |
|---------------|---------------|---------------------|-------------------------|
| -1000 | 1000 | 105 | 0 |
| 1001 | 3000 | 140 | 0 |
| 3001 | 5000 | 175 | 0 |
| 5001 | 7000 | 210 | 0 |
| 7001 | 9000 | 245 | 0 |
| 9001 | 11000 | 280 | 0 |

| Category: | Delta T | Clear Day |
|-----------|--------------|-----------|
| A | -9 Deg. F. | |
| B | +9 Deg. F. | |
| C | +36 Deg. F. | |
| D | +80 Deg. F. | |
| E | +144 Deg. F. | |

Enter Solar Panel Make and Model Number Selected for Project:

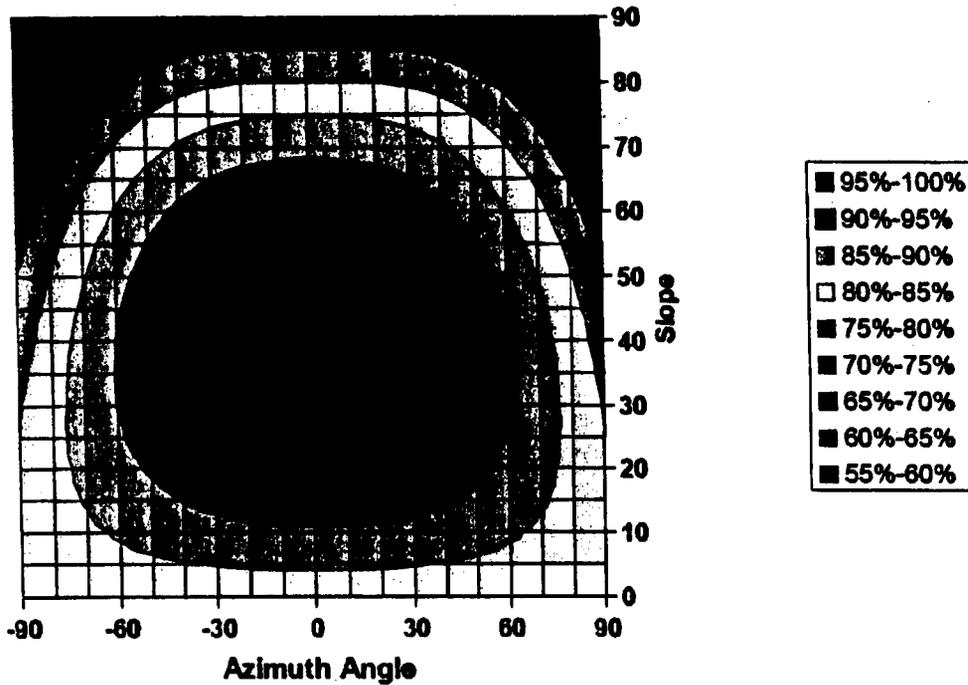
| | | | |
|-----------------------|---|--------|-------------------|
| Step #1: | Enter the result of the Design Review of the Design Annual Building Loss = | | BTU/Year |
| Step #2: | Enter the result of the Utility Bill Review of the Actual Annual Building Loss (If not Electric, Natural Gas or Propane Heat, enter 0 = | | BTU/Year |
| Step #3: | Calculate the Lesser of the Result in Step #1 & Step #2 = This is the Annual Building Heat Requirement. | 0 | BTU/Year |
| Step #4: | Enter Elevation of the Solar Space Heated Building: | | Feet AMSL |
| Step #4 cont: | Number of Heating Days per Heating Season from Elevation Zone Table: | 105 | Days per Year |
| Step #4 cont: | Calculate Average Daily Building Heat Requirement = | 0 | BTU/Day |
| Step #5: | Enter Passive Heat Storage Specific Heat Capacity from Building Design Review: | | BTU/Deg. F. |
| Step #5 cont: | Enter Maximum Daily Floor Temperature Variation Allowed by Building Occupants (Max of 10 Degrees F.) | | Degree F. |
| Step #5 cont: | Calculate Maximum Passive Heat Storage Capacity = | 0 | BTU |
| Step #6 cont: | Enter Total Active Heat Storage Heat Capacity from Building Design Review: | | BTU |
| Step #6 cont: | Calculate Maximum Total Heat Storage Capacity = | 0 | BTU |
| Step #6: | Calculate the Lesser of the Average Daily Building Heat Requirement in Step #4 and the Maximum Total Storage Capacity in Step #6. This is the Maximum Useful Daily Solar Heat Input. | 0 | BTU/Day |
| Step #7: | Size the Solar Panels based on a total daily solar heat input no greater than the Maximum Useful Daily Solar Heat Input. Enter the single panel SRCC OG-108 Collector Thermal Performance Rating data in the Table Above. | 0 | BTU/Day per Panel |
| Step #7cont: | Enter the Total number of solar panels to be installed: | | # of Panels |
| Step #7cont: | Calculate the Average Expected Daily Solar Heat Input: | 0 | BTU/Day |
| Step #8: | Calculate the Expected Annual Useful Solar KWH Heat Input using the Number of Heating Days times the Average Expected Daily Solar Heat Input / 3412 BTU/KWH | 0 | KWH/Year |
| Step #9: | Enter the UFI per first year KWH UCPP Incentive Rate: | | \$/KWH |
| Step #9 cont: | Calculate the Total Maximum UFI Payment Subject to Possible Limitation by the 50% of Initial Cost Cap & 15% Minimum Customer Contribution: | \$0.00 | \$ |
| Step #10: | Enter the Total Solar Space Heating System Initial Cost: This should not include costs for Passive Heat Storage or Building Heating System. | | \$ |
| Step #10 cont: | Calculate the Total Expected Federal and Arizona Incentives for this Project: | \$0.00 | \$ |
| Step #10 cont: | Calculate the 15% minimum of the Total Solar Space Heating System Initial Cost to be paid by Customer | \$0.00 | \$ |
| Step #10 cont: | Calculate the Total Actual UFI Payment: | \$0.00 | \$ |

Solar Water Heating and Space Heating: Residential and Small Commercial

Attachment C

Solar Hot Water Off-Angle and Shading Annual Energy Derating Chart

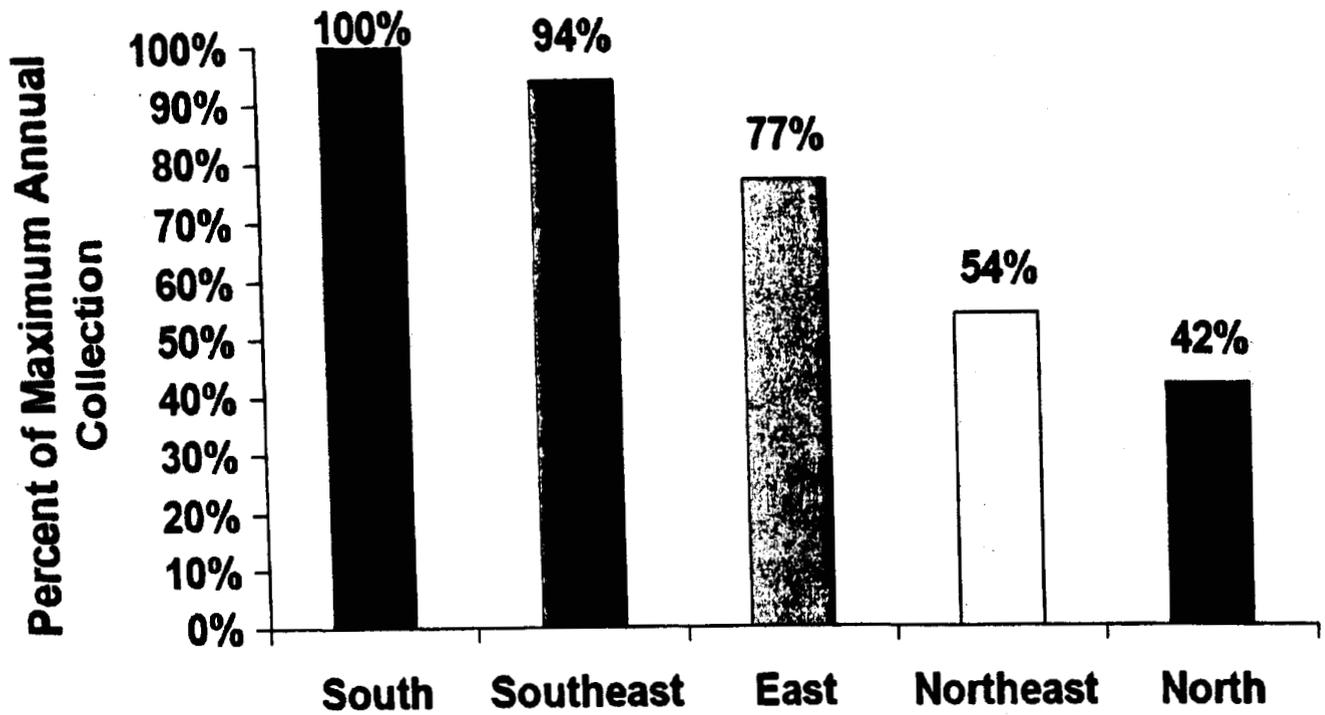
I
Orientation Effect on Annual Output



If the SHW system falls outside of the 95-100% performance band, then the UFI for the system will be derated. The incentive will be derated based on the decrease in annual energy output anticipated by this chart.

Solar Water Heating and Space Heating: Residential and Small Commercial

Attachment D
Solar Hot Water System Azimuth Angle Derating Chart



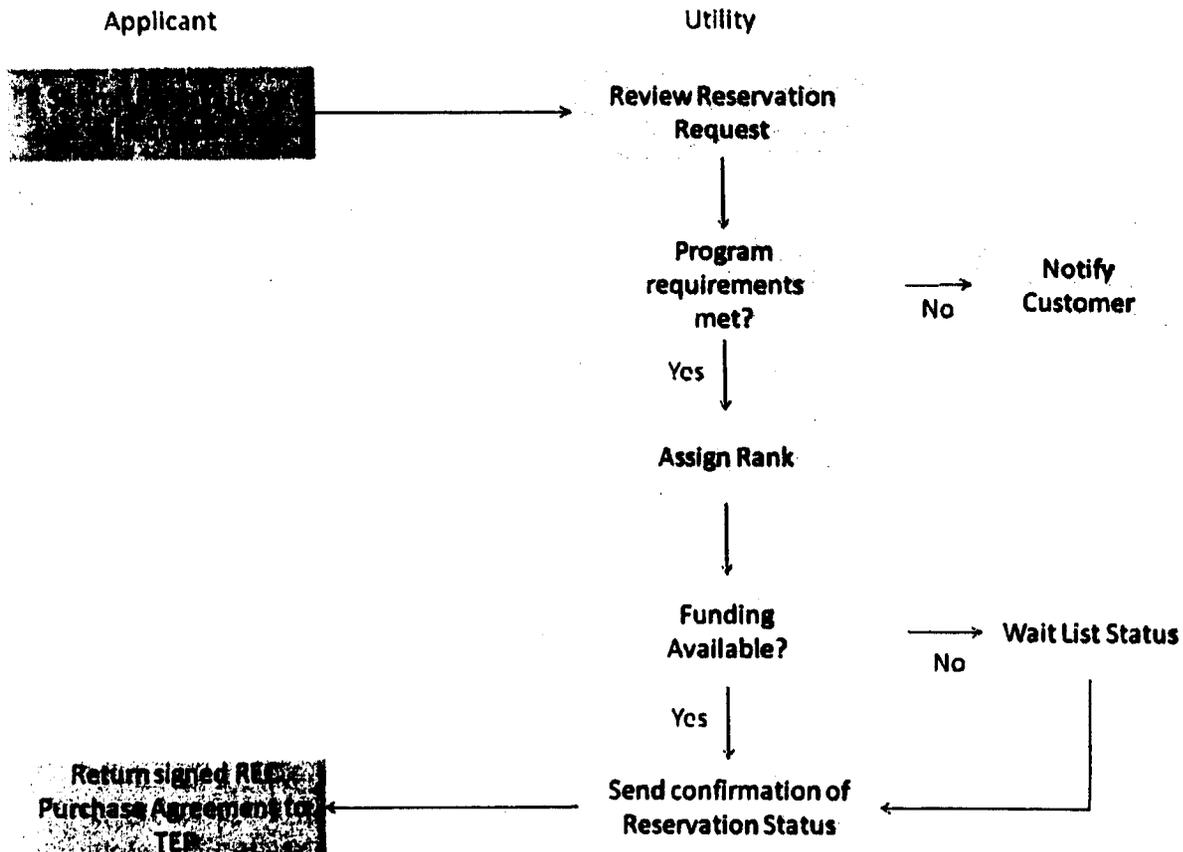
Large Commercial Solar Water Heating and Space Heating: Systems with Annual Production Output Larger Than 35,000 kWh Equivalent

Tucson Electric Power Company ("TEP" or the "Company") is committed to assisting our customers in developing their own renewable generation resources, through a balanced and supportive renewable energy distributed generation incentive program. Our goal is to create a program that will provide incentives for affordable, environmentally sensitive, customer-sited renewable energy generation systems to supplement TEP customer's energy needs. A properly designed system, matched to a customer's energy use, will provide a reduction in utility bills through the use of renewable resources. This program reflects our commitment to reduce the cost of developing renewable energy resources.

PROCESS FOR OBTAINING INCENTIVES

The process for obtaining incentives from TEP involves the flow of information between the applicant and TEP. The following sections reflect the typical four-step process.

Step 1 – Reservation Request and Assignment of Reservation Status



Solar Water Heating and Space Heating: Large Commercial

The applicant must first submit the reservation request to TEP. The reservation request includes information about the TEP customer on whose property the system will be located, the system, the calculation of the incentive, and the installer of the system.

TEP will review the reservation request within 90 days of receipt of the request to ensure the application conforms to program requirements.

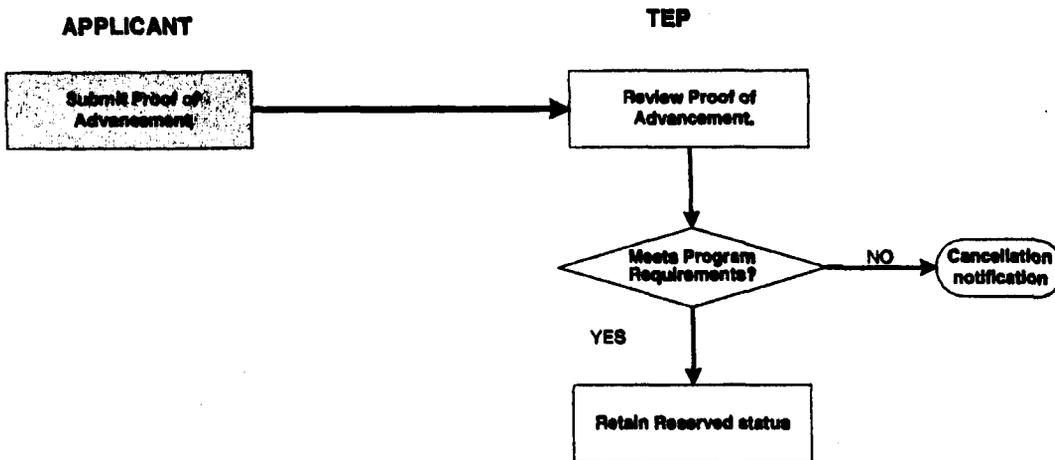
- Reservation requests for non-residential systems larger than 35,000 kWh equivalent annual production are assigned a rank based on the lowest expected life cycle credit purchase cost and likelihood of construction.
- In the event of a tie in the ranking, when the program would be fully subscribed if both projects were given reservation status, funds will be awarded based on the date of receipt of the completed reservation request.

If the reservation request is approved, TEP will send a confirmation to the applicant. A reservation request may be denied for two different reasons, each with its own consequences:

- The reservation request may be denied because it is not in conformance with program requirements. In this case, TEP will send notice that the request is cancelled.
- The reservation request may be denied because funding is not available. In this case, TEP will send a notification to the applicant that the request will be placed on a waiting list.

After reviewing the reservation request, TEP will assign a reservation status.

Step 2 – Proof of Advancement



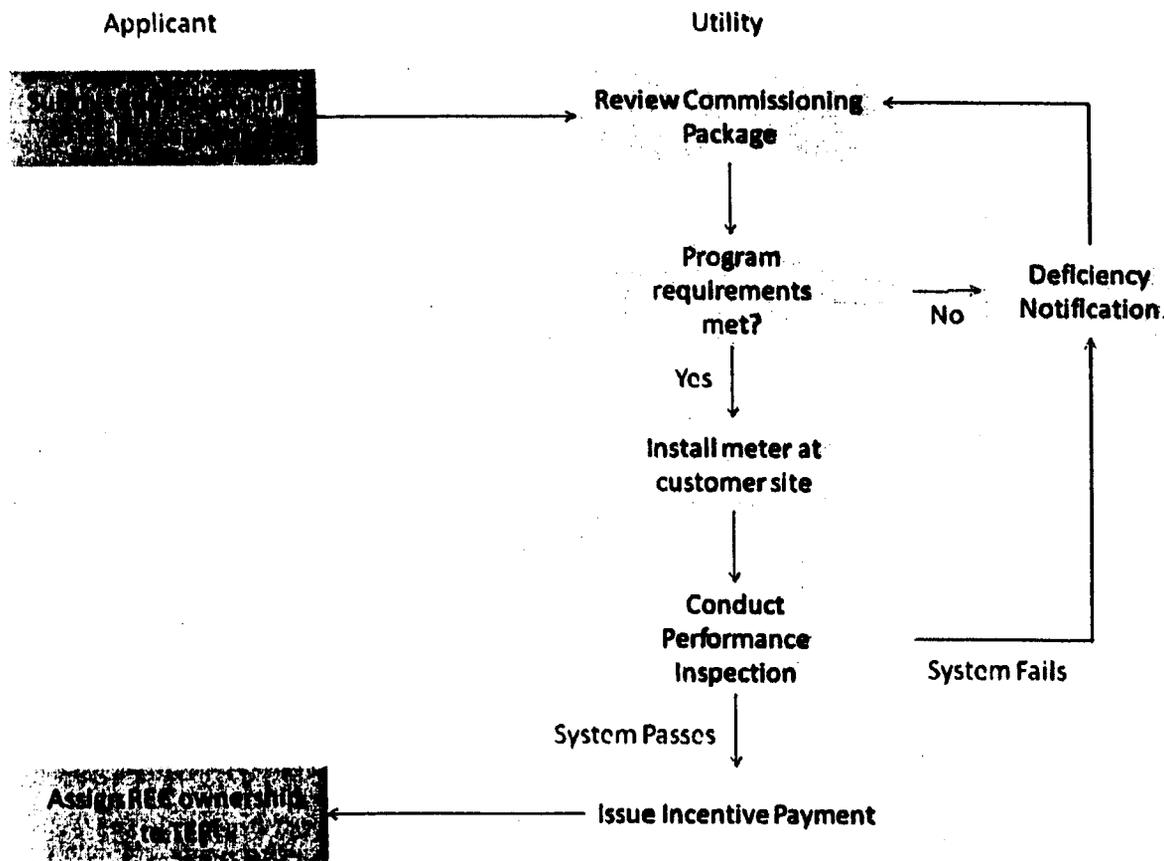
Applicants for non-residential systems larger than 35,000 kWh equivalent annual production output must submit proof of project advancement to TEP within 120 days of the date of reservation confirmation from TEP to retain the reservation. At a minimum, the Proof of Project Advancement documentation for a non-residential project larger than 35,000 kWh equivalent annual production output will include the following:

Solar Water Heating and Space Heating: Large Commercial

- A project agreement (between customer and installer);
- An executed installation agreement including all project participants;
- Building and/or construction permits and/or a full set of design development or construction drawings (80% or more complete).

If proof of project advancement is not received within the specified timeframe, the customer will be notified that the reservation is cancelled. The applicant has the option to reapply for funding after the reservation has been cancelled. The request will be processed in the same manner as a new project reservation and will be contingent upon availability of funding at the time the new application is received.

Step 3 – System Commissioning For Non-Residential Systems Larger Than 35,000 kWh equivalent annual production output



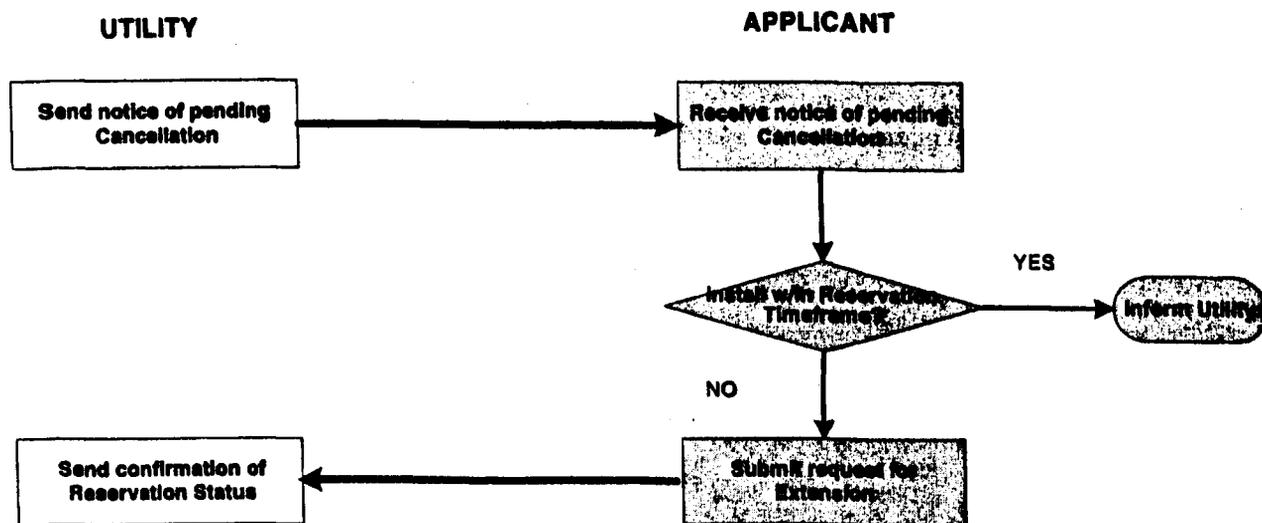
After the system has been commissioned, the applicant must submit a commissioning package to TEP. TEP will review the commissioning package and confirm that all program requirements have been met, including passing the interconnection inspection.

In addition, TEP may, at its discretion, perform a conformance inspection of the system. TEP will notify the applicant of the scheduled conformance inspection and the applicant must make the system

Solar Water Heating and Space Heating: Large Commercial

available for inspection. In most cases in which a conformance inspection is conducted, an incentive payment may not be issued until after a qualifying system has passed the conformance inspection.

Conditional Step – Extension / Cancellation



If all project requirements are not met within 365 days of the date of the reservation confirmation, the applicant must apply for an extension to remain eligible for the incentive. TEP will trigger this request for extension with a notice of the pending cancellation 60 days prior to the date of scheduled cancellation. TEP will grant an extension for up to 90 days following timely receipt of a customer's request for extension. TEP may approve written extension requests detailing the conditions for delay for periods beyond 90 days under extenuating circumstances, or for systems larger than 1 MW.

If all program requirements have not been met within the reservation timeframe, a reservation request will be cancelled unless an extension is granted.

Step 5 – Incentive Payment is Disbursed

Non-residential solar water heating and space heating systems larger than 35,000 kWh equivalent annual production output are eligible for a performance-based incentive (PBI). All PBI Project Agreements will include the following terms:

1. A project agreement between the applicant(s) and TEP that details the assignment of energy and RECs and the assignment of payment must be completed before payments can be disbursed.
2. Quarterly meter reads will be performed by TEP and quarterly payments will be made to the assigned payee within 30 days of the meter reading based on quarterly kWh production. If the payment due is less than \$25.00, it will be held for the next payment period.
3. PBI payments will begin with the first quarterly production following receipt of the completed system commissioning package and conformance inspection, if required, and continue for the life of the agreement term. As part of this provision, it is understood that systems commissioned mid-quarter will receive payment only for the production of that partial quarter.

Solar Water Heating and Space Heating: Large Commercial

TEP's payment of a PBI will assure TEP complete and irrevocable ownership of the REC for the full duration of the PBI agreement. The agreement duration must fully coincide with the PBI payment schedule and the system must be supported by system warranty or planned maintenance schedules for the term of the agreement.

INCENTIVE LEVELS FOR LARGE COMMERCIAL SOLAR WATER HEATING AND SPACE HEATING SYSTEMS

Solar water heating and space heating in large commercial applications are eligible for performance-based incentives (PBIs). In the case of solar water heating and space heating, the PBI allows the customer to collect incentive payments in relation to the actual system production. Table 4 identifies the maximum incentives available for large commercial solar water heating and space heating systems.

In all cases, incentive values listed in Table 4 are maximum values. PBIs are awarded through a bid process, which is discussed later in this section. Applicants are encouraged to submit bids requesting incentive amounts less than the maximums listed. Bids requesting a lower level of incentive payment than the maximum will have an increased chance of acceptance in the allocation ranking process.

Table 4. Maximum Incentives for Large Commercial Solar Water Heating and Space Heating

| Year | Maximum Incentive Level for REC Agreement of the Specified Duration** | | |
|-------|---|-----------------------|-----------------------|
| | 10-year REC Agreement | 15-year REC Agreement | 20-year REC Agreement |
| 2010 | \$0.057/kWh | \$0.052/kWh | \$0.051/kWh |
| 2011* | \$0.057/kWh | \$0.052/kWh | \$0.051/kWh |
| 2012* | \$0.057/kWh | \$0.052/kWh | \$0.051/kWh |
| 2013* | \$0.057/kWh | \$0.052/kWh | \$0.051/kWh |
| 2014* | \$0.057/kWh | \$0.052/kWh | \$0.051/kWh |

Notes:

*Indicates that the incentive for that year has not yet been approved by the Arizona Corporation Commission (ACC). As such, these incentives are tentative and may change pending ACC approval.

**Incentive level is based upon \$/kWh equivalent output

- There is no incentive cap for non-residential systems other than annual program funding considerations.
- A PBI cannot exceed 60% of the real project costs, defined as the undiscounted total system cost plus acceptable financing charges. Acceptable finance charges are finance charges used for the PBI incentive cap calculation and cannot exceed the current prime interest rate plus 5%. Financing charges must be disclosed as part of the commissioning package, if not disclosed before.
- The customer must pay at least 15% of the project cost, after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.
- TEP has adopted a standardized calculation method to support solar space heating system sizing and incentive payment. The display page of the spreadsheet calculation is presented in Attachment B.
- The bid evaluator reserves the right to award incentives to solar thermal projects other than those that meet the specifications outlined in Attachment A. Incentives in these cases will be determined by the bid evaluator.

Solar Water Heating and Space Heating: Large Commercial

The incentive amount will be calculated at the time the application is approved for reservation. If federal or state incentives change during the period of time after the reservation approval, the incentive amount reserved will not be changed as long as the reservation is not cancelled.

TEP's payment of a PBI will assure TEP complete and irrevocable ownership of the REC for the full duration of the PBI agreement. The agreement duration must fully coincide with the PBI payment schedule and the system must be supported by system warranty or planned maintenance schedules for the term of the agreement.

PROJECT FUNDING

Non-residential funds will be committed as bids are accepted; funds will not be placed in reserve for later in the year. As a result, the budget may be committed before the end of the year. Funds will be made available to projects based on a ranking generated by lowest expected life cycle credit purchase cost as provided in the application and verified by TEP. Projects submitted to the utility for reservation will be ranked based on a calculated index value for purposes of allocating non-residential funds as proposed in the application and verified by TEP. Lowest lifecycle cost projects will be funded first. Indexing of the non-residential projects will be performed based on the verified incentive values and duration of the proposed agreement in the application for that project. In addition, the bid evaluator assesses the likelihood that the project will be completed. Projects with higher incentive payments result in a higher expected life cycle credit purchase cost and projects that produce more kWh result in a lower expected life cycle credit purchase cost. In the event of a tie in the ranking, when the program would be fully subscribed if both projects were given reservation status, funds will be awarded based on the date of receipt of the completed reservation request.

Reservation requests will reviewed by the utility on a monthly basis. Once reservation requests are fully ranked each month, notification of reservation approvals and rejections will be made in conformance with the rankings and available funding.

Funds unused in one period will be equally divided among the remaining periods in that year. Funds allocated to non-residential projects will not roll forward from one year to the next. Reservations which are rejected as a result of insufficient program funds may elect to carry forward into the next period and retain the original reservation date. The election must be made at the time of the original application.

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In addition to the other requirements described in this hand book, there are two other types of program details of which system owners and installers should be aware:

1. Installer qualifications
2. System removal

These are described in further detail below.

Solar Water Heating and Space Heating: Large Commercial

Installer Qualifications

All systems receiving incentives under the RECPP must be installed by a qualified installer. The following requirements must be submitted by the applicant as part of the reservation request. TEP will verify that the installer meets the following minimum qualifications prior to confirming a reservation request:

1. The installer must possess a valid license on file with the Arizona Registrar of Contractors ("AZROC") with a license classification appropriate for the technology being installed. Alternatively, the installer must identify use of a contractor holding an appropriate license on file with the AZROC for the technology being installed. A copy of the AZROC license must be provided as part of the reservation request.
2. The installer must possess an Arizona business license that is active and in good standing.

Installers may request that the above information be retained on file with TEP; however, under this option the installer must certify that the information on file remains current with the submission of each reservation request. Information on file must be renewed yearly.

System Removal

If receiving a PBI, the Qualifying System or any components thereof shall not be removed from the premises until the last day of the final month of the final full calendar year of the applicable incentive payment term in the Agreement following completion of system installation of the renewable energy system, without express agreement from TEP. If the Qualifying System is removed in violation of this provision, customer shall immediately reimburse TEP all incentive amounts paid by TEP to customer or on behalf of customer to an authorized third party.

In addition, if a Qualified System is removed, TEP shall monitor that specific customer site to ensure that an additional incentive is not provided for any new distributed renewable energy resource system on that site until the REC contracted operational life of the original system has been completed.

TEP shall attempt to monitor the number of missing or non-working distributed generation systems and shall summarize its observations in its annual Compliance Report.

Solar Water Heating and Space Heating: Large Commercial

Attachment A

Qualifications for Large Non-residential Solar Water Heating and Space Heating

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement which is in conflict with a site-specific governmental requirement shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Equipment Qualifications

1. Solar collector panels used will have a SRCC OG-100 certification or publicly-funded laboratory documentation showing the panel energy output under controlled and replicable test conditions.
2. If annual energy production is expected to exceed 10,000 kWh or equivalent, the system must include a dedicated performance customer-supplied meter to allow for monitoring of the amount of useful heat produced. Otherwise, compliance reporting production will be based on the design energy savings submitted at time of application.
3. Energy savings and designed output for the system will be verified by submitting either a testing certification for a substantially similar system prepared by a publicly funded laboratory or by submitting an engineering report stamped by a registered professional engineer. The engineering report shall provide a description of the system and major components, design criteria and performance expectations, applicable standards and/or codes, and a brief history of components in similar applications.
4. The solar collector, heat exchangers and storage elements shall have an equipment warranty of at least five years to qualify for a PBI.
5. The system will in all cases have a material and full labor warranty of at least five years.

Installation Guidance

1. The horizontal tilt angle of the collector panels should be between 20 and 60 degrees (30 and 60 degrees for space heating applications) and an azimuth angle +/- 45 degrees of south. Azimuth or tilt angles outside these parameters may be reviewed and approved by the utility, at their discretion.
2. All systems should be installed such that the energy collection system is substantially unshaded and should have substantially unobstructed exposure to direct sunlight between the hours of 9:00 a.m. and 3:00 p.m. Solar Hot Water de-rating chart (see Attachment C and D in this section) may be used to adjust incentive level based upon affected output due to shading.
3. The system installation should comply with the design manual.

Solar Water Heating and Space Heating: Large Commercial

4. Heat exchange fluid in glycol systems should be tested, flushed and refilled with new fluid as necessary or at a minimum every five years or sooner per manufacturer's recommendations.
5. It is recommended that the anode rod be checked and replaced per manufacturer's recommendations, but no less frequently than every five years.
6. It is recommended that the system design include a timer, switch, and a temperature sensor on the backup element of the storage tank.
7. It is recommended that in areas where water quality problems are reported to have reduced the expected life of a solar water heater, that a water quality test is performed for each residence to screen for materials that through interaction with the materials of the proposed solar water heating system may reduce the expected operational life of the system components. The customer should consider contacting the manufacturer to determine if warranty or operational life will be affected.
8. In areas subject to snow accumulation, sufficient clearance will be provided to allow a 12" snowfall to be shed from a solar collector without shadowing any part of the collector.
9. Each system shall have a comprehensive operation and maintenance manual at the customer's site, which includes a spare parts list, data sheets and flow diagrams indicating operating temperatures and pressures, maintenance schedules and description of testing methods and each customer must complete an initial start up and operation training review with the contractor at the time of system start up
10. TEP reserves the right to modify standards as technology changes on a case by case basis, pending independent laboratory analysis, Professional Engineer ("PE") stamp, or TEP engineering analysis

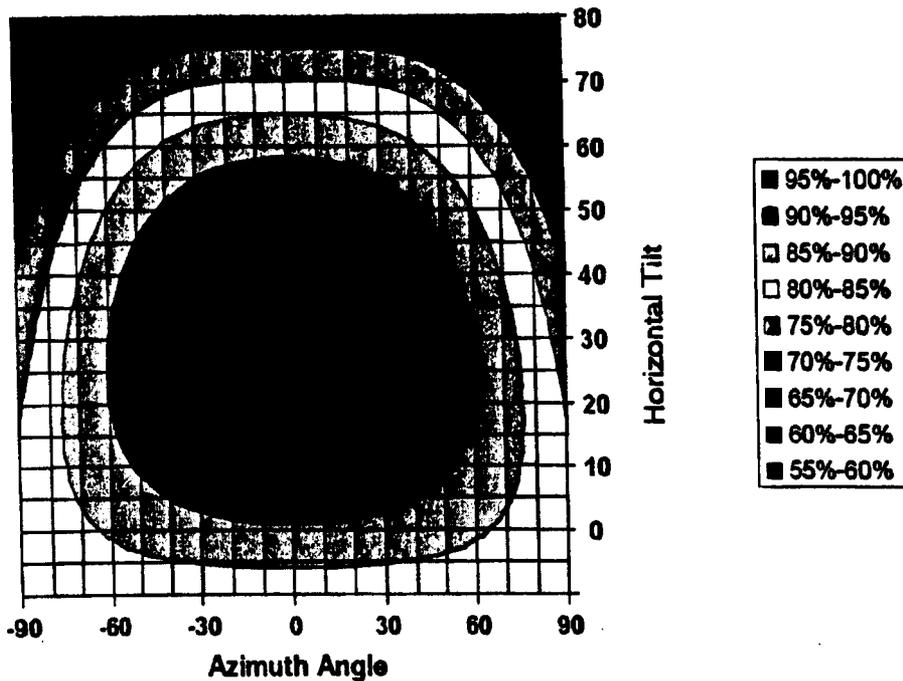
General Requirements

1. The project must comply with applicable local, state, and federal regulations.
2. Products must be installed according to manufacturers' recommendations.
3. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.
4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale.
5. All major system components must be new and must not have been previously placed in service in any other location or for any other application.
6. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production. Certain other non-electric renewable energy production systems, noted below, will require customer supplied metering for PBI payment calculation purposes.
7. If the qualifying system is grid-tied, the system must meet Arizona Corporation Commission Interconnection Requirements for Self-Generation Equipment.

Solar Water Heating and Space Heating: Large Commercial

Attachment C Solar Hot Water Off-Angle and Shading Annual Energy Derating Chart

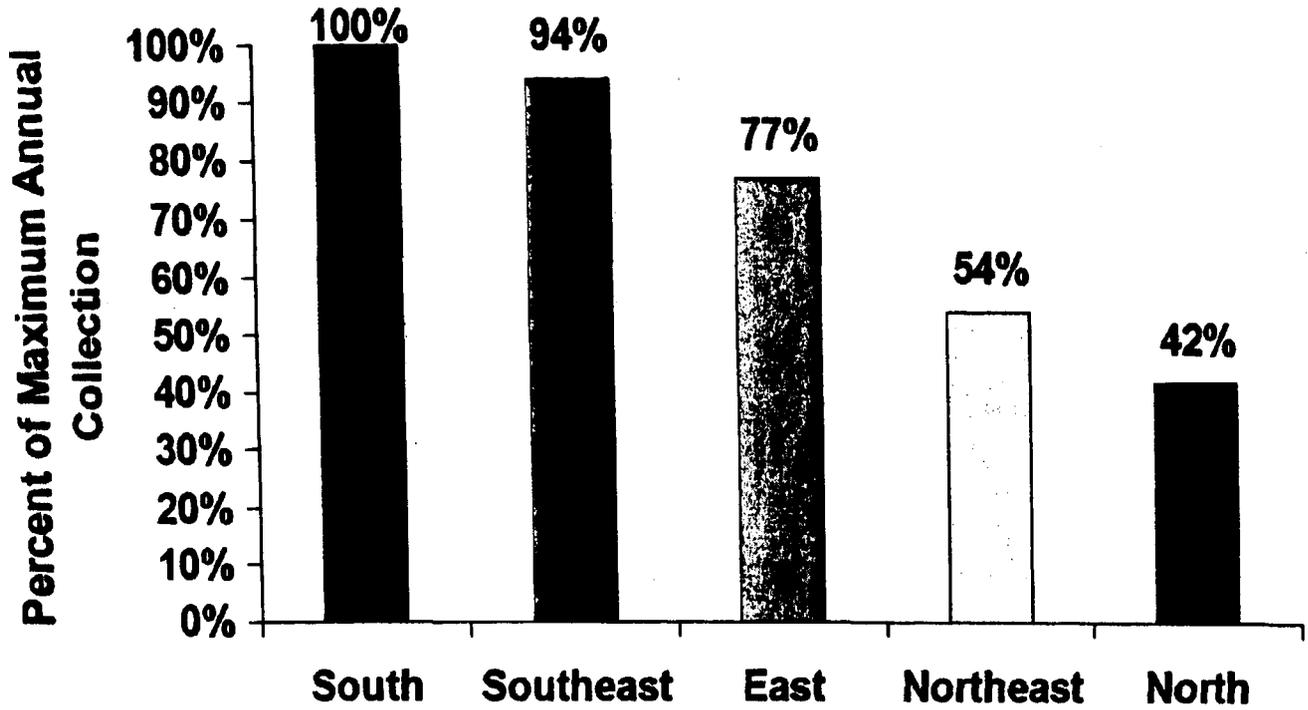
Orientation Effect on Annual Output



If the SHW system falls outside of the 95-100% performance band, then the UFI for the system will be derated. The incentive will be derated based on the decrease in annual energy output anticipated by this chart.

Solar Water Heating and Space Heating: Large Commercial

Attachment D
Solar Hot Water System Azimuth Angle Derating Chart



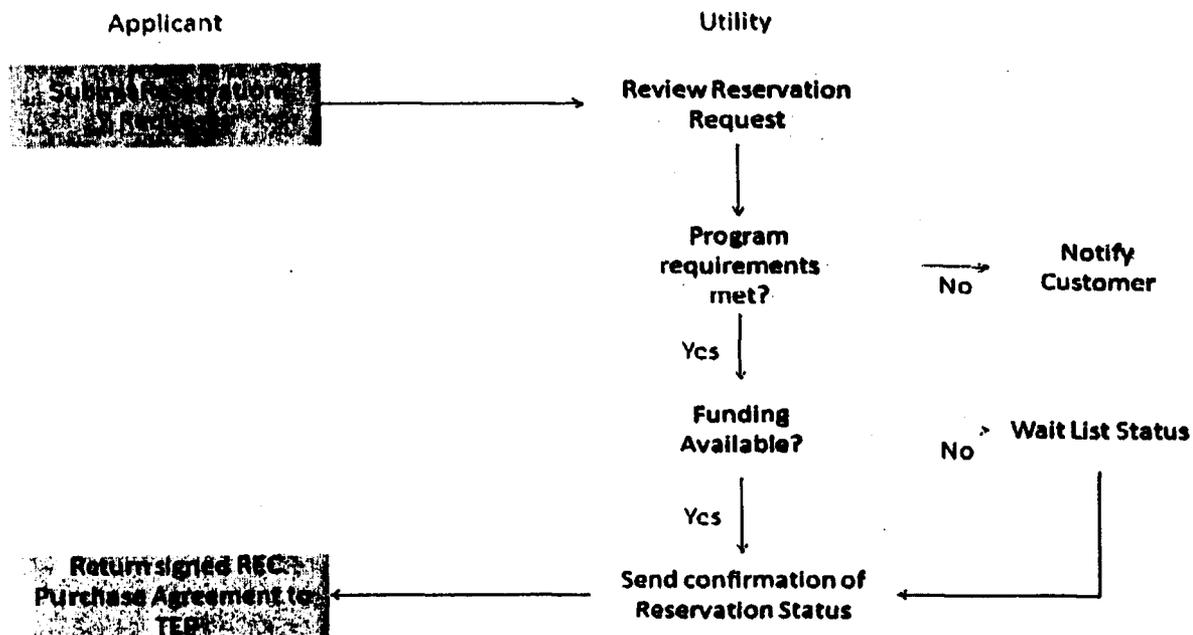
Ground Source Heat Pumps: Residential and Commercial Applications

Tucson Electric Power Company ("TEP" or the "Company") is committed to assisting our customers in develop their own renewable generation resources, through a balanced and supportive renewable energy distributed generation incentive program. Our goal is to create a program that will provide incentives for affordable, environmentally sensitive, customer-sited renewable energy generation systems to supplement TEP customer's energy needs. A properly designed system, matched to a customer's energy use, will provide a reduction in utility bills through the use of renewable resources. This program reflects our commitment to reduce the cost of developing renewable energy resources.

PROCESS FOR OBTAINING INCENTIVES

The process for obtaining incentives from TEP involves the flow of information between the applicant and TEP. The following sections reflect the typical three-step process.

Step 1 - Reservation Request and Assignment of Reservation Status



The applicant must first submit the reservation request to TEP. The reservation request includes information about the TEP customer on whose property the system will be located, the system, the calculation of the incentive, and the installer of the system.

TEP will review the reservation request to ensure the application conforms to program requirements.

- Reservation requests for GSHP systems are processed on a first-come, first-reserved basis.
- Reservation requests for GSHP systems will be reviewed within 30 days of the utility's receipt of the request.

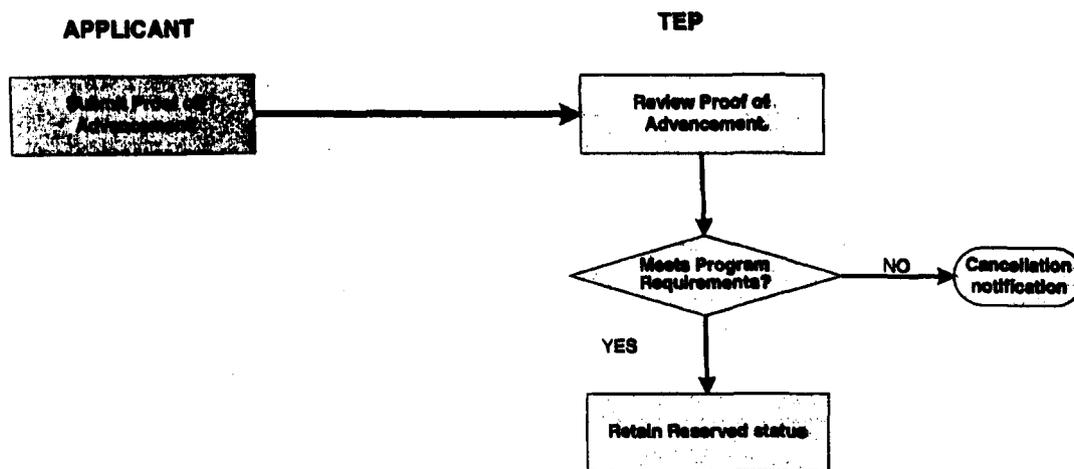
Ground Source Heat Pumps: Residential and Commercial

If the reservation request is approved, TEP will send a confirmation to the applicant. A reservation request may be denied for two different reasons, each with its own consequences:

- The reservation request may be denied because it is not in conformance with program requirements. In this case, TEP will send notice that the request is cancelled.
- The reservation request may be denied because funding is not available. In this case, TEP will send a notification to the applicant that the request will be placed on a waiting list.

After reviewing the reservation request, TEP will assign a reservation status.

Step 2 – Proof of Advancement



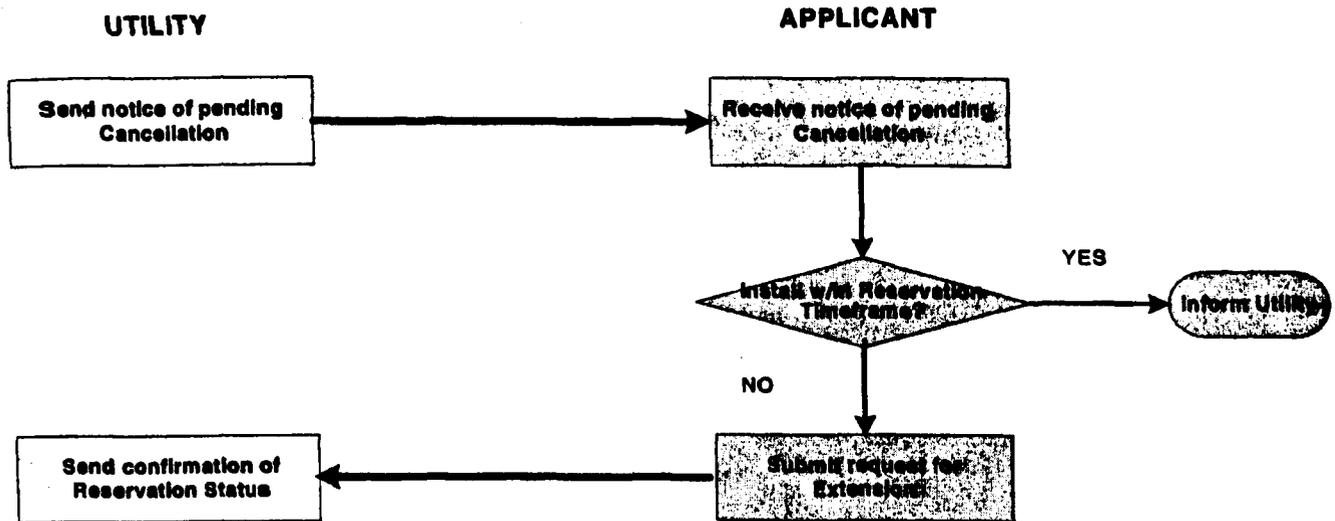
Applicants for GSHP systems must submit proof of project advancement to TEP within 60 days of the date of reservation confirmation from TEP to retain the reservation. Applicants for GSHP systems must provide copies of city/county inspection permits to TEP as documentation of the proof of project advancement. If those permits are not available within 60 days of the date of reservation confirmation, the applicant may also provide these documents in place of the permits:

- Signed agreement
- Assignment of Payment form
- Initial city/county permit application or actual receipt of final acceptance inspection paperwork from the city/county.

If proof of project advancement is not received within the specified timeframe, the applicant will be notified that the reservation is cancelled. The applicant has the option to reapply for funding after the reservation has been cancelled. The request will be processed in the same manner as a new project reservation and will be contingent upon availability of funding at the time the new application is received.

Ground Source Heat Pumps: Residential and Commercial

Conditional Step – Extension / Cancellation

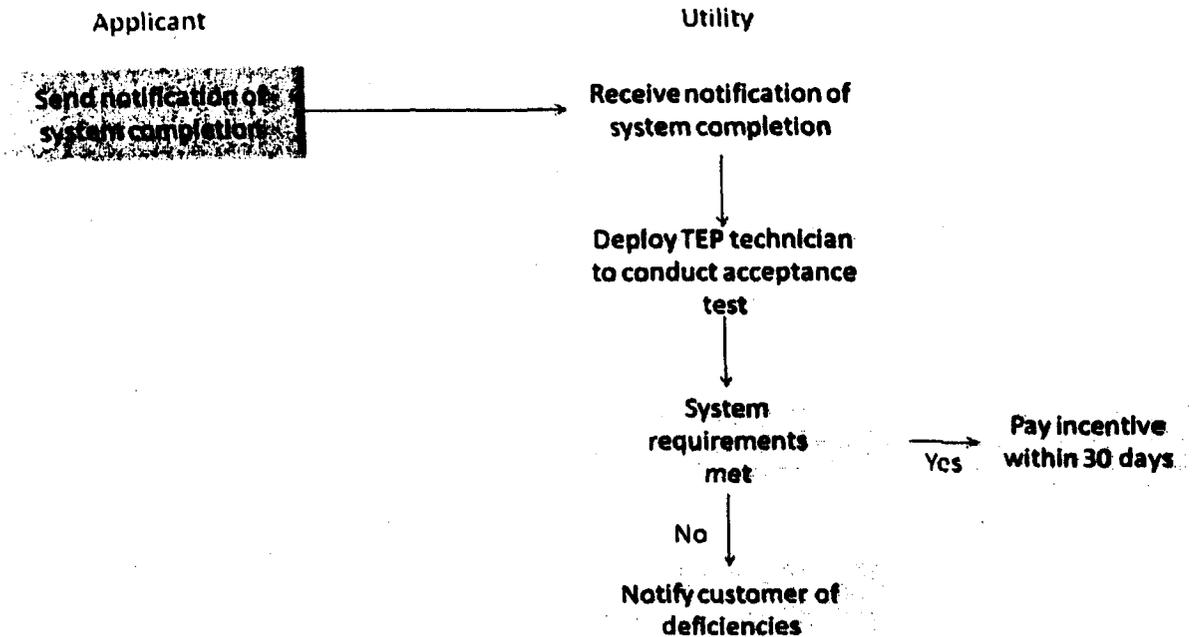


If all project requirements are not met within 180 days of the date of the reservation confirmation, the applicant must apply for an extension to remain eligible for the incentive. TEP will trigger this request for extension with a notice of the pending cancellation 30 days prior to the date of scheduled cancellation. TEP will grant an extension for up to 90 days following timely receipt of a customer's request for extension. TEP may approve written extension requests detailing the conditions for delay for periods beyond 90 days under extenuating circumstances.

If all program requirements have not been met within the reservation timeframe, a reservation request will be cancelled unless an extension is granted.

Ground Source Heat Pumps: Residential and Commercial

Step 3 – Customer Requests Payment



Upon project completion, the customer must notify TEP that the system has been placed in service. This should be done by submitting a copy of the city/county final inspection permit. When TEP receives notification that the system is complete, TEP will perform an "acceptance test." The acceptance test requires that a TEP inspector test the system's compliance with the required specifications and its performance and determine that it is in line with TEP requirements.

If the system meets TEP specifications and performance requirements, TEP will pay the customer the UFI within 30 days of the acceptance test. If the system fails to meet TEP specifications and performance requirements, TEP will notify the customer within 5 days of the acceptance test. The customer will then have 30 days to address the deficiencies and notify TEP that the system is ready to be retested.

INCENTIVE LEVELS FOR RESIDENTIAL AND COMMERCIAL GROUND SOURCE HEAT PUMP SYSTEMS

Residential and small commercial ground source heat pump systems are eligible for up-front incentives ("UFIs"). UFIs are those incentives where the customer receives a one-time payment based on the system's designed capacity. Table 5 identifies the incentives available for GSHP systems.

Ground Source Heat Pumps: Residential and Commercial

Table 5. Up-Front Incentives for Residential and Commercial Ground Source Heat Pump Systems

| Year | Incentive Level |
|-------|-----------------|
| 2010 | \$500/ton |
| 2011* | \$500/ton |
| 2012* | \$500/ton |
| 2013* | \$500/ton |
| 2014* | \$500/ton |

Notes:

*Indicates that the incentive for that year has not yet been approved by the Arizona Corporation Commission (ACC). As such, these incentives are tentative and may change pending ACC approval.

- There is no cap on the UFI that can be paid to residential customers.
- Commercial customers will receive a UFI up to a cap of 200 tons. If a commercial system is installed larger than 200 tons, it must apply under the large commercial program.
- The UFI may not exceed 30% of total system cost.
- The customer must pay at least 15% of the project cost, after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.

The incentive amount will be calculated at the time the application is approved for reservation. If federal or state incentives change during the period of time after the reservation approval, the incentive amount reserved will not be changed as long as the reservation is not cancelled.

In return for TEP's payment of a UFI, TEP will be given complete and irrevocable ownership of the RECs until December 31st of the 20th full calendar year after completion of installation of the system. Operational life during that time frame must be supported by system warranty or planned maintenance schedules.

PROJECT FUNDING

Funds will be made available for reservations on a first-come, first-reserved basis, until annual funding is reserved. Reservations which are rejected as a result of insufficient funds will be placed on a waiting list and offered the opportunity to retain their original reservation date for one additional quarter without the need to resubmit application documentation. If the incentive level has changed from the date of the original reservation to the date when the reservation is approved, the new incentive level shall be applied.

PROJECT REQUIREMENTS AFTER INSTALLATION

After completing the installation of a small distributed energy system, the customer must continue to provide information to TEP about the system's performance.

All customers receiving renewable energy self-generation incentives are obligated to report system production to TEP in accordance with the reporting schedule established in the program agreement between TEP and the customer. TEP, at its option, may perform periodic inspection of the system for operation, metered production, and reporting purposes.

Ground Source Heat Pumps: Residential and Commercial

THE FINE PRINT

In addition to the other requirements described in this hand book, there are two other types of program details of which system owners and installers should be aware:

1. Installer qualifications
2. System removal

These are described in further detail below.

Installer Qualifications

All systems receiving incentives under the RECPP must be installed by a qualified installer. The following requirements must be submitted by the applicant as part of the reservation request. TEP will verify that the installer meets the following minimum qualifications prior to confirming a reservation request:

1. The installer must possess a valid license on file with the Arizona Registrar of Contractors ("AZROC") with a license classification appropriate for the technology being installed. Alternatively, the installer must identify use of a contractor holding an appropriate license on file with the AZROC for the technology being installed. A copy of the AZROC license must be provided as part of the reservation request.
2. The installer must possess an Arizona business license that is active and in good standing.

Installers may request that the above information be retained on file with TEP; however, under this option the installer must certify that the information on file remains current with the submission of each reservation request. Information on file must be renewed yearly.

System Removal

If receiving a UFI, neither the Qualifying System nor any components thereof shall be removed from the premises (by either the applicant or future owners or occupants of the property) until December 31st of the 20th full calendar year following completion of system installation of the renewable energy system, without express agreement of TEP. If the Qualifying System is removed by any party in violation of this provision, customer shall immediately reimburse TEP all incentive amounts paid by TEP to customer or on behalf of customer to an authorized third party.

In addition, if a Qualified System is removed, TEP shall monitor that specific customer site to ensure that an additional incentive is not provided for any new distributed renewable energy resource system on that site until the REC contracted operational life of the original system has been completed.

TEP shall attempt to monitor the number of missing or non-working distributed generation systems and shall summarize its observations in its annual Compliance Report.

Ground Source Heat Pumps: Residential and Commercial

ATTACHMENT A

QUALIFICATIONS FOR RESIDENTIAL AND COMMERCIAL GROUND SOURCE HEAT PUMP SYSTEMS

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement which is in conflict with a site-specific governmental requirement shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Equipment Qualifications

1. Geothermal system installations involving a regulated boiler or pressure vessel are required to comply with all Arizona state boiler regulations; provide a qualifying boiler inspection identification number; and keep all applicable permits in good standing.
2. Energy savings and designed output for the system will be verified by submitting either a testing certification for a substantially similar system prepared by a publicly-funded laboratory or by submitting an engineering report stamped by a registered third-party professional engineer. The engineering report shall provide a description of the system and major components, design criteria and performance expectations, applicable standards and/or codes, and a brief history of components in similar applications.
3. Energy production for space heating, space cooling and process heating will be calculated as one kWh of energy per 3,415 Btu of useful heat delivered by the system as measured by a dedicated heat delivery measuring meter and used by the building space or process.
4. The system will have a material and labor warranty of at least five years.
5. The system must meet Arizona DEQ environmental standards.
6. The most current Energy Star Standards must be achieved. These can be found at <http://www.energystar.gov/index.cfm?c=geoheat.prcritgeoheatpumps>.

Installation Guidance

Because of the individual nature of geothermal systems, care should be taken to make sure the system complies with all applicable permitting and regulatory requirements including, but not limited to, air emission standards and air permit regulations.

General Requirements

1. The project must comply with applicable local, state, and federal regulations.
2. Products must be installed according to manufacturers' recommendations.

Ground Source Heat Pumps: Residential and Commercial

3. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.
4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale.
5. All major system components must be new and must not have been previously placed in service in any other location or for any other application.
6. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production. Certain other non-electric renewable energy production systems, noted below, will require customer supplied metering for PBI payment calculation purposes.
7. If the qualifying system is grid-tied, the system must meet Arizona Corporation Commission Interconnection Requirements for Self-Generation Equipment.

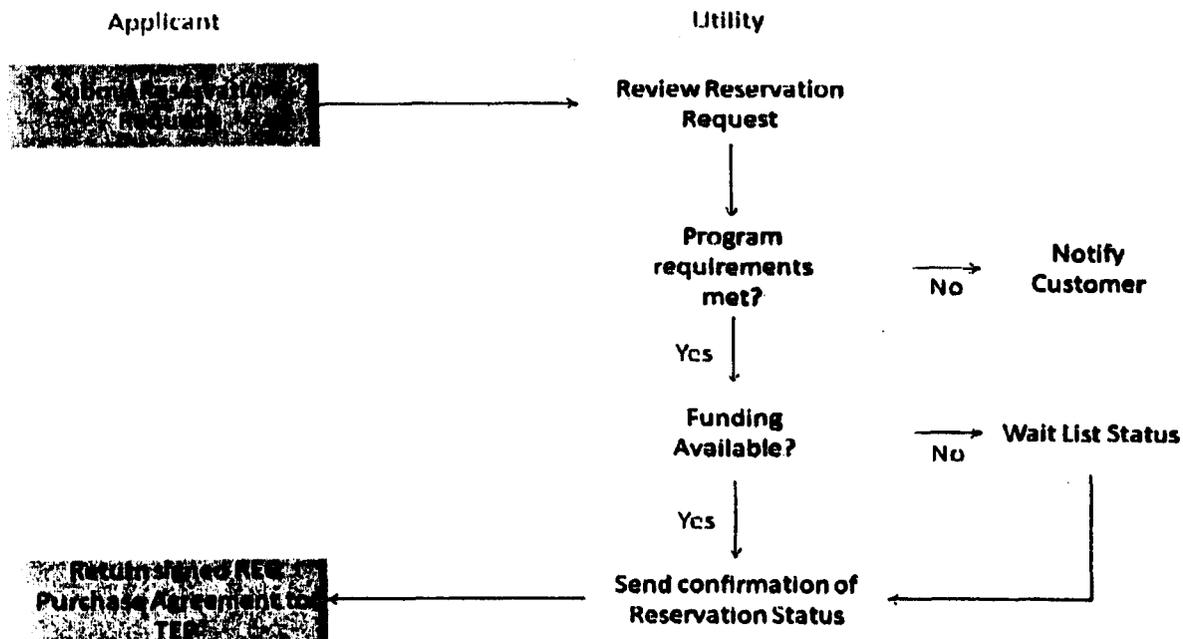
Wind Systems Smaller Than 1 MW

Tucson Electric Power Company ("TEP" or the "Company") is committed to assisting our customers in developing their own renewable generation resources, through a balanced and supportive renewable energy distributed generation incentive program. Our goal is to create a program that will provide incentives for affordable, environmentally sensitive, customer-sited renewable energy generation systems to supplement TEP customer's energy needs. A properly designed system, matched to a customer's energy use, will provide a reduction in utility bills through the use of renewable resources. This program reflects our commitment to reduce the cost of developing renewable energy resources.

PROCESS FOR OBTAINING INCENTIVES

The process for obtaining incentives from TEP involves the flow of information between the applicant and TEP. The following sections reflect the typical three-step process.

Step 1 - Reservation Request and Assignment of Reservation Status



The applicant must first submit the reservation request to TEP. The reservation request includes information about the TEP customer on whose property the system will be located, the wind system, the calculation of the incentive, and the installer of the system.

TEP will review the reservation request to ensure the application conforms to program requirements.

- Reservation requests for small wind systems are processed on a first-come, first-reserved basis.
- Reservation requests for small wind systems will be reviewed within 30 days of the utility's receipt of the request.

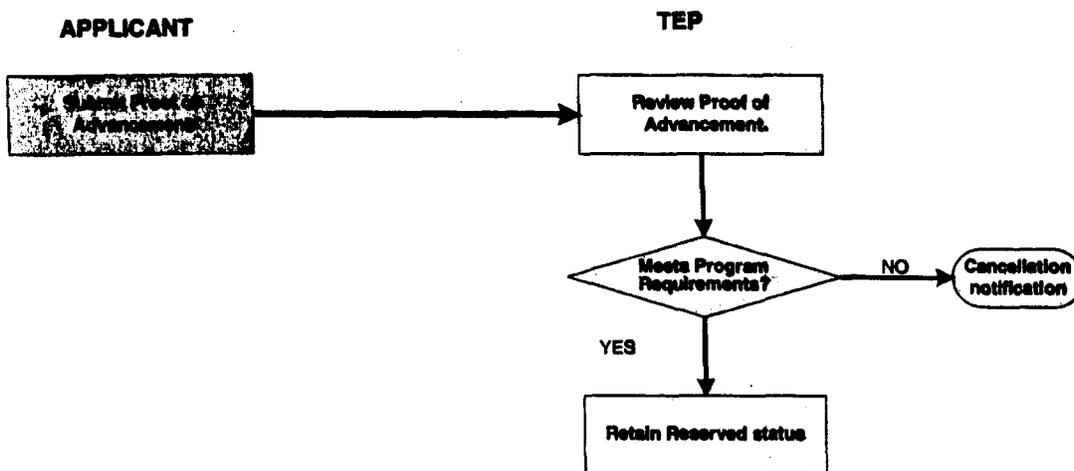
Wind Systems Smaller Than 1 MW

If the reservation request is approved, TEP will send a confirmation to the applicant. A reservation request may be denied for two different reasons, each with its own consequences:

- The reservation request may be denied because it is not in conformance with program requirements. In this case, TEP will send notice that the request is cancelled.
- The reservation request may be denied because funding is not available. In this case, TEP will send a notification to the applicant that the request will be placed on a waiting list.

After reviewing the reservation request, TEP will assign a reservation status.

Step 2 – Proof of Advancement



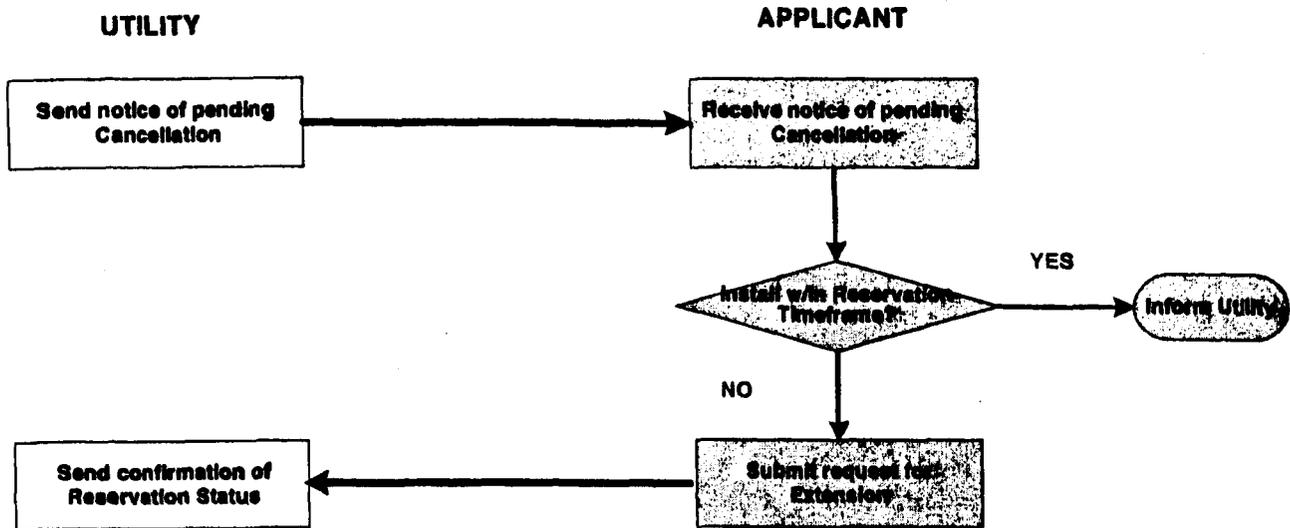
Applicants for wind systems smaller than 1 MW must submit proof of project advancement to TEP within 60 days of the date of reservation confirmation from TEP to retain the reservation. Applicants for wind systems smaller than 1 MW must provide copies of city/county inspection permits to TEP as documentation of the proof of project advancement. If those permits are not available within 60 days of the date of reservation confirmation, the applicant may also provide these documents in place of the permits:

- Signed agreement
- Assignment of Payment form
- Initial city/county permit application or actual receipt of final acceptance inspection paperwork from the city/county.

If proof of project advancement is not received within the specified timeframe, the applicant will be notified that the reservation is cancelled. The applicant has the option to reapply for funding after the reservation has been cancelled. The request will be processed in the same manner as a new project reservation and will be contingent upon availability of funding at the time the new application is received.

Wind Systems Smaller Than 1 MW

Conditional Step - Extension / Cancellation

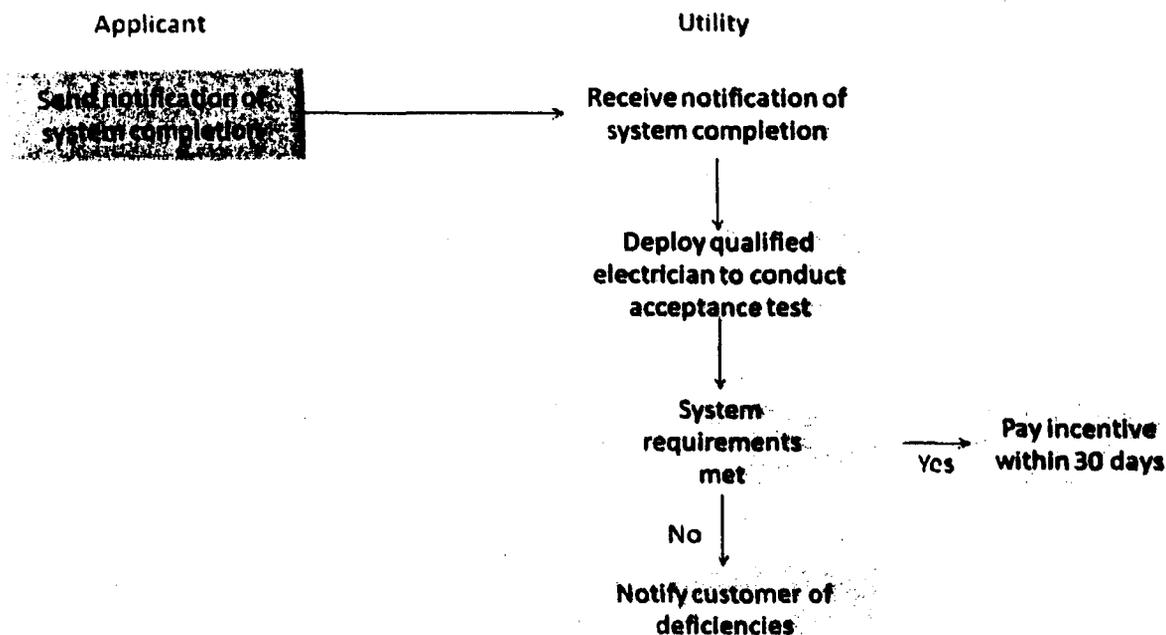


If all project requirements are not met within 180 days of the date of the reservation confirmation, the applicant must apply for an extension to remain eligible for the incentive. TEP will trigger this request for extension with a notice of the pending cancellation 30 days prior to the date of scheduled cancellation. TEP will grant an extension for up to 90 days following timely receipt of a customer's request for extension. TEP may approve written extension requests detailing the conditions for delay for periods beyond 90 days under extenuating circumstances.

If all program requirements have not been met within the reservation timeframe, a reservation request will be cancelled unless an extension is granted.

Wind Systems Smaller Than 1 MW

Step 3 – Customer Requests Payment



Upon project completion, the customer must notify TEP that the system has been placed in service. This should be done in by submitting a copy of the city/county final inspection permit. When TEP receives notification that the system is complete, TEP will perform an “acceptance test.” The acceptance test requires that a TEP inspector test the system’s compliance with the required specifications and its performance and determine that it is in line with TEP requirements.

If the system meets TEP specifications and performance requirements, TEP will pay the customer the UFI within 30 days of the acceptance test. If the system fails to meet TEP specifications and performance requirements, TEP will notify the customer within 5 days of the acceptance test. The customer will then have 30 days to address the deficiencies and notify TEP that the system is ready to be retested.

INCENTIVE LEVELS FOR SMALL WIND SYSTEMS

Wind systems smaller than 1 MW are eligible for up-front incentives (“UFIs”). UFIs are those incentives where the customer receives a one-time payment based on the system’s designed capacity. Table 6 identifies the incentives available for wind systems smaller than 1 MW.

Table 6. Up-Front Incentives for Small Wind Systems

| | On-Grid Incentive Level | Off-Grid Incentive Level |
|-------|-------------------------|--------------------------|
| 2010 | \$2.25/W AC | \$1.80/W AC |
| 2011* | \$2.25/W AC | \$1.80/W AC |
| 2012* | \$2.25/W AC | \$1.80/W AC |
| 2013* | \$2.25/W AC | \$1.80/W AC |
| 2014* | \$2.25/W AC | \$1.80/W AC |

Wind Systems Smaller Than 1 MW

Notes:

*Indicates that the incentive for that year has not yet been approved by the Arizona Corporation Commission ("ACC" or the "Commission"). As such, these incentives are tentative and may change pending ACC approval.

- TEP customers will receive a UFI up to a cap of 1 MW. If a system is installed larger than 1 MW, it must apply under the utility-scale program.
- The UFI may not exceed 60% of total System Cost.
- The customer must pay at least 15% of the project cost, after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.

The incentive amount will be calculated at the time the application is approved for reservation. If federal or state incentives change during the period of time after the reservation approval, the incentive amount reserved will not be changed as long as the reservation is not cancelled.

In return for TEP's payment of a UFI, TEP will be given complete and irrevocable ownership of the RECs until December 31st of the 20th full calendar year after completion of installation of the system. Operational life during that time frame must be supported by system warranty or planned maintenance schedules.

PROJECT FUNDING

Funds will be made available for reservations on a first-come, first-reserved basis, until annual funding is reserved. Reservations which are rejected as a result of insufficient funds will be placed on a waiting list and offered the opportunity to retain their original reservation date for one additional quarter without the need to resubmit application documentation. If the incentive level has changed from the date of the original reservation to the date when the reservation is approved, the new incentive level shall be applied.

NET METERING

All projects must comply with ACC net metering rules.

PROJECT REQUIREMENTS AFTER INSTALLATION

After completing the installation of a small wind project, the customer must continue to provide information to TEP about the system's performance.

All customer systems receiving renewable energy self-generation incentives are obligated to include a TEP-supplied production meter, which will report system production to TEP in accordance with the regular meter-reading schedule. TEP, at its option, may perform periodic inspection of the system for operation, metered production, and reporting purposes.

Wind Systems Smaller Than 1 MW

THE FINE PRINT

In addition to the other requirements described in this hand book, there are three other types of program details of which system owners and installers should be aware:

1. Installer qualifications
2. Customer-installed systems
3. System removal

These are described in further detail below.

Installer Qualifications

All systems receiving incentives under the RECPP must be installed by a qualified installer. The following requirements must be submitted by the applicant as part of the reservation request. TEP will verify that the installer meets the following minimum qualifications prior to confirming a reservation request:

1. The installer must possess a valid license on file with the Arizona Registrar of Contractors ("AZROC") with a license classification appropriate for the technology being installed. Alternatively, the installer must identify use of a contractor holding an appropriate license on file with the AZROC for the technology being installed. A copy of the AZROC license must be provided as part of the reservation request.
2. The installer must possess an Arizona business license that is active and in good standing.

Installers may request that the above information be retained on file with TEP; however, under this option the installer must certify that the information on file remains current with the submission of each reservation request. Information on file must be renewed yearly.

Installations by Customer (Residential Photovoltaic and Wind Only)

Residential customers may self-install PV systems 10 kWac or smaller providing they adhere to all applicable codes and standards. The customer-installed systems are eligible for an incentive equal to 70% of the standard UFI, as otherwise listed in the incentive table above. TEP reserves the right to withdraw this self-install qualification condition at any time in the future if TEP finds self-installations are not adhering to the applicable codes and standards or are found to be of poor quality workmanship.

System Removal

If receiving a UFI, neither the Qualifying System nor any components thereof shall be removed from the premises (by either the applicant or future owners or occupants of the property) until December 31st of the 20th full calendar year following completion of system installation of the renewable energy system, without express agreement of TEP. If the Qualifying System is removed by any party in violation of this provision, customer shall immediately reimburse TEP all incentive amounts paid by TEP to customer or on behalf of customer to an authorized third party.

Wind Systems Smaller Than 1 MW

In addition, if a Qualified System is removed, TEP shall monitor that specific customer site to ensure that an additional incentive is not provided for any new distributed renewable energy resource system on that site until the REC contracted operational life of the original system has been completed.

TEP shall attempt to monitor the number of missing or non-working distributed generation systems and shall summarize its observations in its annual Compliance Report.

Wind Systems Smaller Than 1 MW

Attachment A Qualifications for Wind Systems Smaller Than 1 MW

A small wind generator is a system with a nameplate capacity rating of one MW or less. The technology criteria described below are intended for small wind generators with a nameplate rating of 100 kW or less. Larger systems will be required to submit a detailed package describing site selection, energy production modeling, and an engineered system design and installation report.

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement which is in conflict with a site-specific governmental requirement shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Equipment Qualifications

1. Eligible small wind systems must be certified and nameplate rated by the Consumer Energy Center ("CEC")⁶. See www.consumerenergycenter.org/erprebate/equipment.html for a list of certified generators. For grid tied or off-grid wind generators where an inverter is used, the CEC listed nameplate rating of the wind generator will be multiplied by the CEC approved weighted efficiency percentage listed for the inverter in the "List of Eligible Inverters" at www.consumerenergycenter.org/cgi-bin/eligible_inverters.cgi to calculate the wind turbine nameplate rating for use in determining the UFI payment.⁷
2. Grid connected inverters used as part of the system shall carry a UL listing certifying full compliance with Underwriter's Laboratory ("UL")-1741.
3. A system must include a dedicated performance meter (provided by TEP) installed to allow for measurement of the amount of electricity produced.
4. The performance meter and utility disconnect for grid tied systems will be installed in a location readily accessible by TEP during normal business hours.
5. Off-grid systems of capacity less than 10 kWac will not be metered. Compliance reporting production will be based on an annual 20% capacity factor.
6. The tower used in the installation must be designed by an Arizona registered engineer and must be suitable for use with the wind generator. Tower installation must be designed and supervised by individuals familiar with local geotechnical conditions.

⁶ TEP recommends review of the SWCC standards for rating small wind generators once they become available for purposes of supplanting the CEC requirement in this Technology Criterion.

⁷ Inverter outputs are rated in dc Watts and must be converted to ac Watts for incentive calculation purposes.

Wind Systems Smaller Than 1 MW

7. To receive a UFI, the wind generator and system must be covered by a manufacturer's warranty of at least 5 years. Otherwise the system will qualify for a PBI. In all cases, the wind system will have a material and labor warranty of at least five years.

Installation Guidance

1. **Location:** a wind turbine hub should be at least 20 feet above any surrounding object and at least 28 feet above the ground within a 250-foot radius. Wind generators should be installed in locations with an elevation at or above the general elevation of the surrounding terrain.
2. **Lot Size:** should be one-half acre at minimum. Municipalities and public facilities such as schools and libraries are exempt from the minimum lot size requirements.

General Requirements

1. The project must comply with applicable local, state, and federal regulations.
2. Products must be installed according to manufacturers' recommendations.
3. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.
4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale.
5. All major system components must be new and must not have been previously placed in service in any other location or for any other application.
6. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production. Certain other non-electric renewable energy production systems, noted below, will require customer supplied metering for PBI payment calculation purposes.
7. Wind system components shall be properly labeled, including AC & DC disconnects (if present), wind generation meter, service panel (outside cover), and breakers inside the service panel.
8. If the qualifying system is grid-tied, the system must meet Arizona Corporation Commission Interconnection Requirements for Self-Generation Equipment.
See <http://images.edocket.azcc.gov/docketpdf/0000074361.pdf> for these requirements.

Non-Residential Solar Daylighting

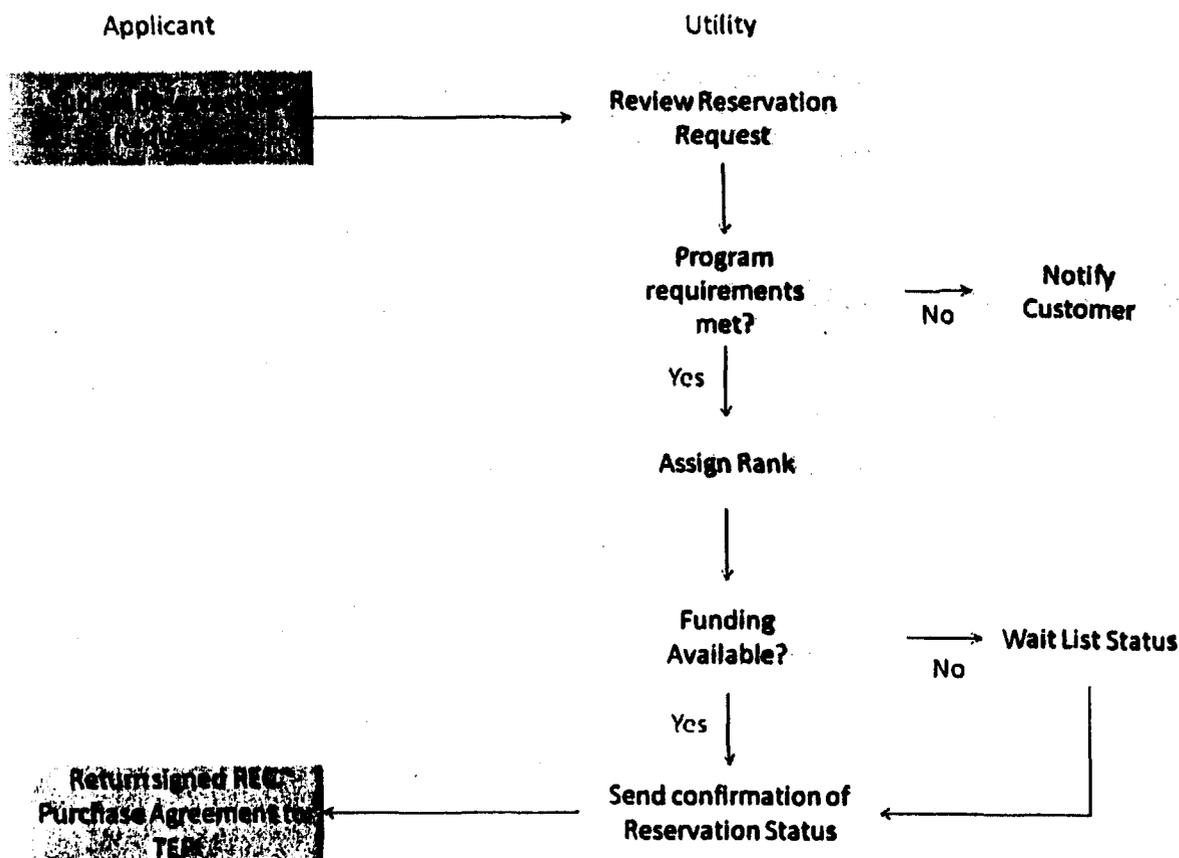
Non-Residential Solar Daylighting

Tucson Electric Power Company ("TEP" or the "Company") is committed to assisting our customers in developing their own renewable generation resources, through a balanced and supportive renewable energy distributed generation incentive program. Our goal is to create a program that will provide incentives for affordable, environmentally sensitive, customer-sited renewable energy generation systems to supplement TEP customer's energy needs. A properly designed system, matched to a customer's energy use, will provide a reduction in utility bills through the use of renewable resources. This program reflects our commitment to reduce the cost of developing renewable energy resources.

PROCESS FOR OBTAINING INCENTIVES

The process for obtaining incentives from TEP involves the flow of information between the applicant and TEP. The following sections reflect the typical five-step process.

Step 1 - Reservation Request and Assignment of Reservation Status



Non-Residential Solar Daylighting

The applicant must first submit the reservation request to TEP. The reservation request includes information about the TEP customer on whose property the system will be located, the system itself, the calculation of the incentive, and the installer of the system.

TEP will review the reservation request within 90 days of receipt of the request to ensure the application conforms to program requirements.

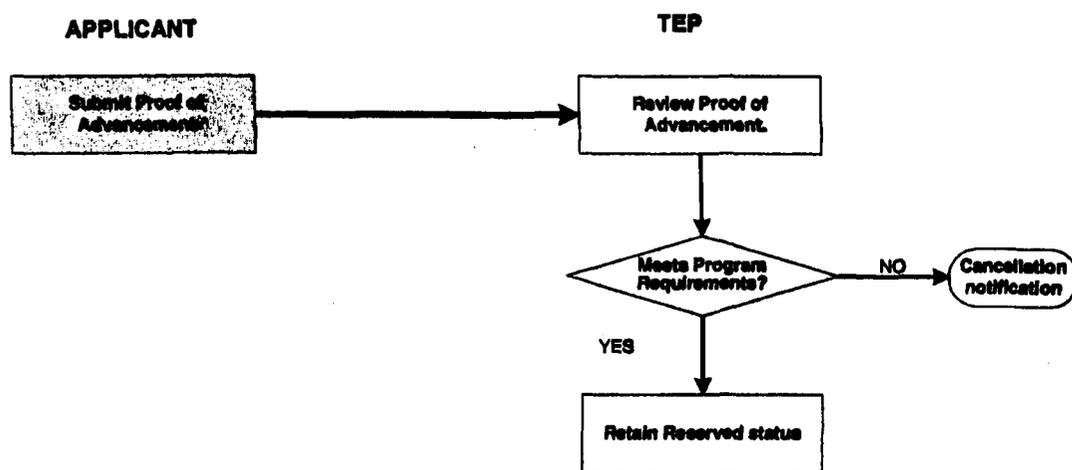
- Reservation requests for non-residential solar daylighting are assigned a rank based on the lowest expected life cycle credit purchase cost.
- In the event of a tie in the ranking, when the program would be fully subscribed if both projects were given reservation status, funds will be awarded based on the date of receipt of the completed reservation request.

If the reservation request is approved, TEP will send a confirmation to the applicant. A reservation request may be denied for two different reasons, each with its own consequences:

- The reservation request may be denied because it is not in conformance with program requirements. In this case, TEP will send notice that the request is cancelled.
- The reservation request may be denied because funding is not available. In this case, TEP will send a notification to the applicant that the request will be placed on a waiting list.

After reviewing the reservation request, TEP will assign a reservation status.

Step 2 – Proof of Advancement



Applicants for non-residential solar daylighting must submit proof of project advancement to TEP within 120 days of the date of reservation confirmation from TEP to retain the reservation. At a minimum, the Proof of Project Advancement documentation for a non-residential solar daylighting system will include the following:

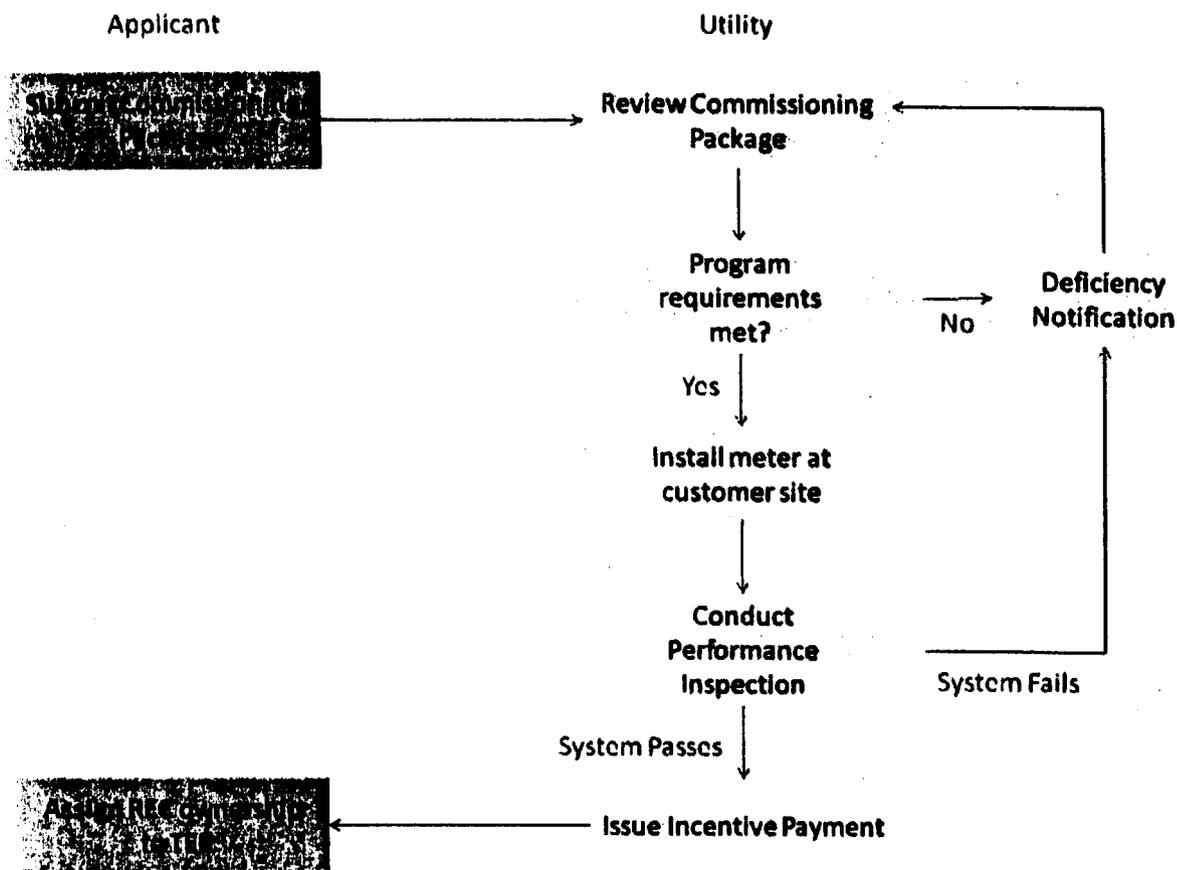
- A project agreement (between customer and installer);
- An executed installation agreement including all project participants;

Non-Residential Solar Daylighting

- Building and/or construction permits and/or a full set of design development or construction drawings (80% or more complete); and

If proof of project advancement is not received within the specified timeframe, the customer will be notified that the reservation is cancelled. The applicant has the option to reapply for funding after the reservation has been cancelled. The request will be processed in the same manner as a new project reservation and will be contingent upon availability of funding at the time the new application is received.

Step 3 – System Commissioning



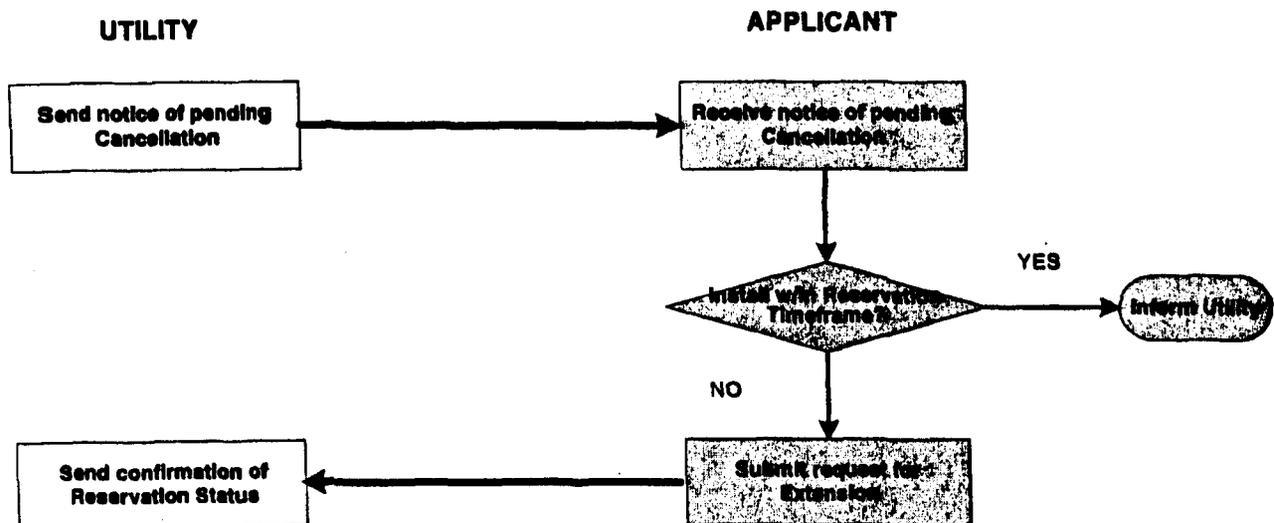
After the non-residential solar daylighting system has been commissioned, the applicant must submit a commissioning package to TEP. TEP will review the commissioning package and confirm that all program requirements have been met, including passing the interconnection inspection.

After receiving the commissioning package, TEP will dispatch a TEP representative to install the meter at the system site. The meter will be certified according to the TEP standards. The customer must provide access to the site during normal business hours so that the TEP representative can install the meter.

Non-Residential Solar Daylighting

In addition, TEP may, at its discretion, perform a conformance inspection of the system. TEP will notify the applicant of the scheduled conformance inspection and the applicant must make the system available for inspection. In most cases in which a conformance inspection is conducted, an incentive payment may not be issued until after a qualifying system has passed the conformance inspection.

Conditional Step - Extension / Cancellation



If all project requirements are not met within 365 days of the date of the reservation confirmation, the applicant must apply for an extension to remain eligible for the incentive. TEP will trigger this request for extension with a notice of the pending cancellation 60 days prior to the date of scheduled cancellation. TEP will grant an extension for up to 90 days following timely receipt of a customer's request for extension. TEP may approve written extension requests detailing the conditions for delay for periods beyond 90 days under extenuating circumstances.

If all program requirements have not been met within the reservation timeframe, a reservation request will be cancelled unless an extension is granted.

Non-Residential Solar Daylighting

Step 4 – Incentive Payment is Disbursed

Non-residential daylighting systems are eligible for a performance-based incentive (“PBI”). All PBI Project Agreements will include the following terms:

1. A project agreement between the applicant(s) and TEP that details the assignment of energy and RECs and the assignment of payment must be completed before payments can be disbursed.
2. Quarterly meter reads will be performed by TEP and quarterly payments will be made to the assigned payee within 30 days of the meter reading based on quarterly kWh production. If the payment due is less than \$25.00, it will be held for the next payment period.
3. PBI payments will begin with the first quarterly production following receipt of the completed system commissioning package and conformance inspection, if required, and continue for the life of the agreement term. As part of this provision, it is understood that systems commissioned mid-quarter will receive payment only for the production of that partial quarter.

TEP’s payment of a PBI will assure TEP complete and irrevocable ownership of the REC for the full duration of the PBI agreement. The agreement duration must fully coincide with the PBI payment schedule and the system must be supported by system warranty or planned maintenance schedules for the term of the agreement.

INCENTIVE LEVELS FOR NON-RESIDENTIAL SOLAR DAYLIGHTING SYSTEMS

Non-residential solar daylighting systems are eligible for performance-based incentives (“PBIs”). The PBI allows the customer to collect incentive payments in direct relation to the actual system production.

Table 7 identifies the incentives available for non-residential daylighting systems.

In all cases, incentive values listed in

Table 7 are maximum values. PBIs are awarded through a bid process, which is discussed later in this section. Applicants are encouraged to submit bids requesting incentive amounts less than the maximums listed. Bids requesting a lower level of incentive payment than the maximum will have an increased chance of acceptance in the allocation ranking process.

Table 7. Up-Front Incentives for Non-Residential Daylighting Systems

| Year | Incentive Level |
|-------|--|
| 2010 | \$0.18/kWh savings during first five years |
| 2011* | \$0.18/kWh savings during first five years |
| 2012* | \$0.18/kWh savings during first five years |
| 2013* | \$0.18/kWh savings during first five years |
| 2014* | \$0.18/kWh savings during first five years |

Notes:

- *Indicates that the incentive for that year has not yet been approved by the Arizona Corporation Commission (“ACC” or the “Commission”). As such, these incentives are tentative and may change pending Commission approval.
- The per-kWh incentive applies only to energy savings realized during the first five years of project

Non-Residential Solar Daylighting

operation. The incentive is paid out over the five-year period.

- The UFI may not exceed 60% of total System Cost.
- The customer must pay at least 15% of the project cost, after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.
- As described later in this document, these incentive levels may be decreased because of sub-optimal system positioning.

The incentive amount will be calculated at the time the application is approved for reservation. If federal or state incentives change during the period of time after the reservation approval, the incentive amount reserved will not be changed as long as the reservation is not cancelled.

In return for TEP's payment of a UFI, TEP will be given complete and irrevocable ownership of the RECs until December 31st of the 20th full calendar year after completion of installation of the system. Operational life during that time frame must be supported by system warranty or planned maintenance schedules.

PROJECT FUNDING

Funds will be made available for reservations on a first-come, first-served basis, until annual funding is reserved. Reservations which are rejected as a result of insufficient funds will be placed on a waiting list and offered the opportunity to retain their original reservation date for one additional quarter without the need to resubmit application documentation. If the incentive level has changed from the date of the original reservation to the date when the reservation is approved, the new incentive level shall be applied.

Funds unused in one period will be equally divided among the remaining periods in that year. Funds allocated to non-residential projects will not roll forward from one year to the next. Reservations which are rejected as a result of insufficient program funds may elect to carry forward into the next period and retain the original reservation date. The election must be made at the time of the original application.

THE FINE PRINT

In addition to the other requirements described in this hand book, there are two other types of program details of which system owners and installers should be aware:

1. Installer qualifications
2. System removal

These are described in further detail below.

Installer Qualifications

All systems receiving incentives under the RECPP must be installed by a qualified installer. The following requirements must be submitted by the applicant as part of the reservation request. TEP will verify that the installer meets the following minimum qualifications prior to confirming a reservation request:

Non-Residential Solar Daylighting

1. The installer must possess a valid license on file with the Arizona Registrar of Contractors ("AZROC") with a license classification appropriate for the technology being installed. Alternatively, the installer must identify use of a contractor holding an appropriate license on file with the AZROC for the technology being installed. A copy of the AZROC license must be provided as part of the reservation request.
2. The installer must possess an Arizona business license that is active and in good standing.

Installers may request that the above information be retained on file with TEP; however, under this option the installer must certify that the information on file remains current with the submission of each reservation request. Information on file must be renewed yearly.

System Removal

If receiving a PBI, the Qualifying System or any components thereof shall not be removed from the premises until the last day of the final month of the final full calendar year of the applicable incentive payment term in the Agreement following completion of system installation of the renewable energy system, without express agreement from TEP. If the Qualifying System is removed in violation of this provision, customer shall immediately reimburse TEP all incentive amounts paid by TEP to customer or on behalf of customer to an authorized third party.

In addition, if a Qualified System is removed, TEP shall monitor that specific customer site to ensure that an additional incentive is not provided for any new distributed renewable energy resource system on that site until the REC contracted operational life of the original system has been completed.

TEP shall attempt to monitor the number of missing or non-working distributed generation systems and shall summarize its observations in its annual Compliance Report.

Non-Residential Solar Daylighting

Attachment A Qualifications for Non-Residential Solar Daylighting

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement, which is in conflict with a site-specific governmental requirement, shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Equipment Qualifications

All systems shall include the following components as part of the day lighting system:

1. Skylights must adhere to the 2009 International Energy Conservation Code with regard to the U-factor and solar heat gain coefficient and must have a minimum visible transmittance based on the CPUC Savings by Design program (Note: U-value and SHGC ratings should be based on a 20 degree ratings, now standard through the NFRC):
 - o Maximum U-factor of 0.75
 - o Maximum solar heat gain coefficient of 0.35
 - o Minimum visible transmittance of 0.45
2. Skylight can be in a toplighting configuration only.
3. Skylight area may not exceed 3% of the gross roof area.
4. Skylights must be certified by the National Fenestration Rating Council (NFRC).
5. If artificial lighting systems remain a part of the installation, the system shall include automated lighting control(s) which are programmed to keep electric lights off/dimmed during daylight hours of sufficient solar insulation to provide minimum design illumination levels.
6. The system will have a material and labor warranty of at least five years.

Installation Guidance

All systems should be installed such that the skylight dome is substantially unshaded and have substantially unobstructed exposure to direct sunlight between the hours of 9:00 a.m. and 3:00 p.m.

General Qualifications

1. The project must comply with applicable local, state, and federal regulations.
2. Products must be installed according to manufacturers' recommendations.
3. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.

Non-Residential Solar Daylighting

4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale.
5. All major system components must be new and must not have been previously placed in service in any other location or for any other application.
6. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production. Certain other non-electric renewable energy production systems, noted below, will require customer supplied metering for PBI payment calculation purposes.
7. If the qualifying system is grid-tied, the system must meet Arizona Corporation Commission Interconnection Requirements for Self-Generation Equipment. See <http://images.edocket.azcc.gov/docketpdf/0000074361.pdf> for these requirements.

Additional Technologies with Prescriptive Incentives

Additional Technologies with Prescriptive Incentives:

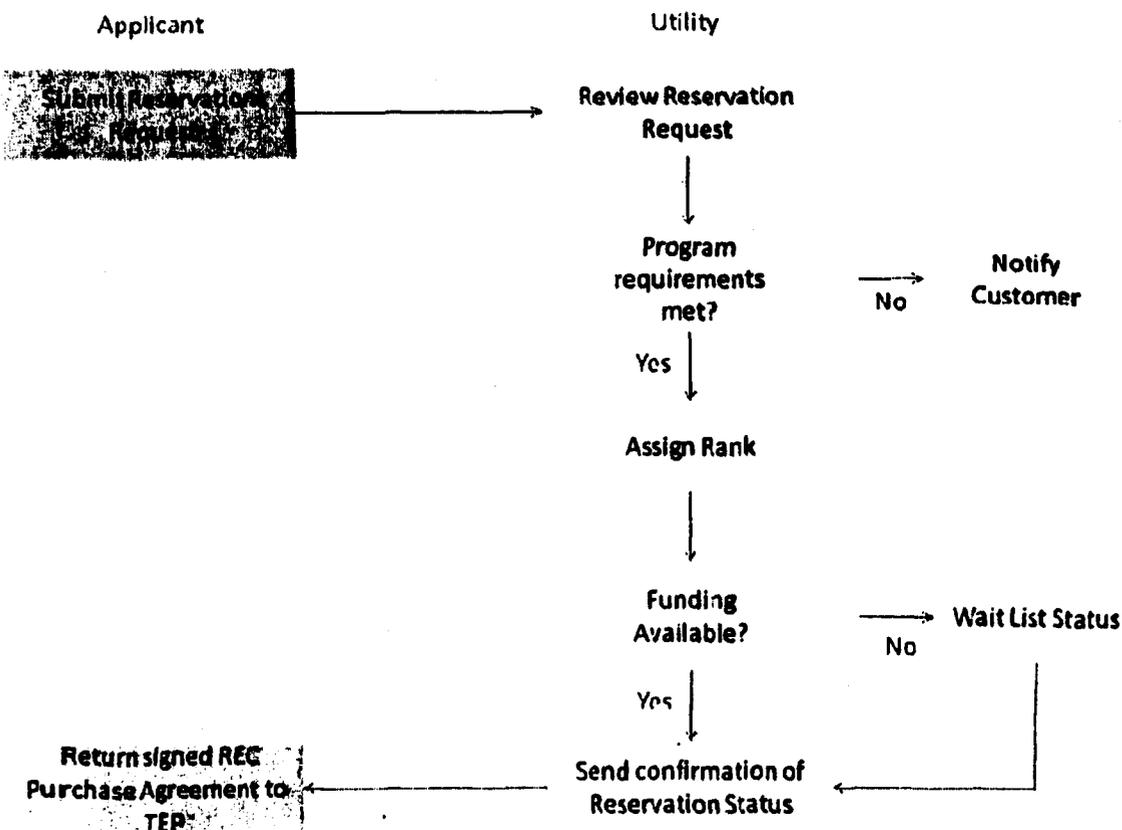
- (1) Biomass/Blogas or Geothermal Space Heating, Process Heating, or Space Cooling; Non-Residential
- (2) Biomass/Blogas, Hydro or Geothermal Electric
- (3) Solar Space Cooling

Tucson Electric Power Company ("TEP" or the "Company") is committed to assisting our customers in developing their own renewable generation resources, through a balanced and supportive renewable energy distributed generation incentive program. Our goal is to create a program that will provide incentives for affordable, environmentally sensitive, customer-sited renewable energy generation systems to supplement TEP customer's energy needs. A properly designed system, matched to a customer's energy use, will provide a reduction in utility bills through the use of renewable resources. This program reflects our commitment to reduce the cost of developing renewable energy resources.

PROCESS FOR OBTAINING INCENTIVES

The process for obtaining incentives from TEP involves the flow of information between the applicant and TEP. The following sections reflect the typical five-step process.

Step 1 – Reservation Request and Assignment of Reservation Status



Additional Technologies with Prescriptive Incentives

The applicant must first submit the reservation request to TEP.⁸ The reservation request includes information about the TEP customer on whose property the system will be located, the system, the calculation of the incentive, and the installer of the system.

TEP will review the reservation request within 90 days of receipt of the request to ensure the application conforms to program requirements.

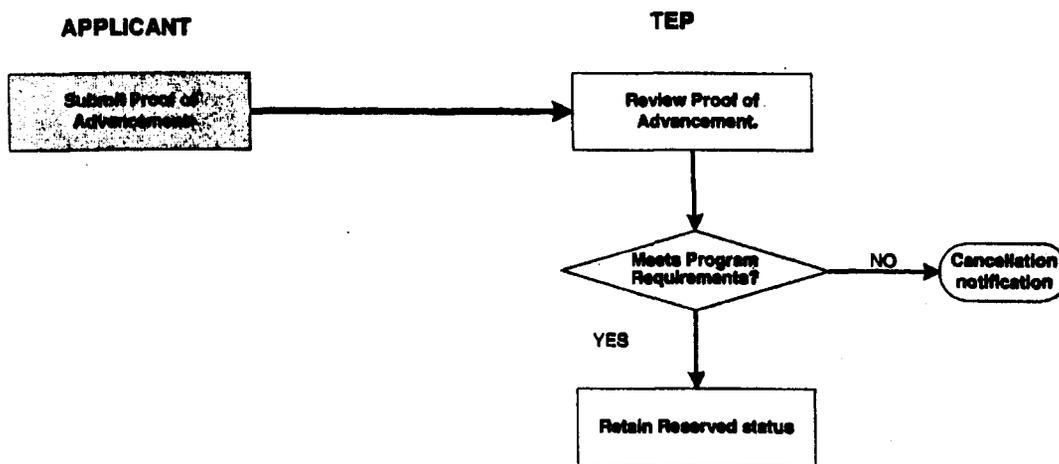
- Reservation requests for non-residential systems larger than 100 kW are assigned a rank based on the lowest expected life cycle credit purchase cost and likelihood of construction.
- In the event of a tie in the ranking, when the program would be fully subscribed if both projects were given reservation status, funds will be awarded based on the date of receipt of the completed reservation request.

If the reservation request is approved, TEP will send a confirmation to the applicant. A reservation request may be denied for two different reasons, each with its own consequences:

- The reservation request may be denied because it is not in conformance with program requirements. In this case, TEP will send notice that the request is cancelled.
- The reservation request may be denied because funding is not available. In this case, TEP will send a notification to the applicant that the request will be placed on a waiting list.

After reviewing the reservation request, TEP will assign a reservation status.

Step 2 – Proof of Advancement



Applicants for non-residential systems larger than 100 kW must submit proof of project advancement to TEP within 120 days of the date of reservation confirmation from TEP to retain the reservation. The Proof of Project Advancement documentation for a non-residential project larger than 100 kW may include the following:

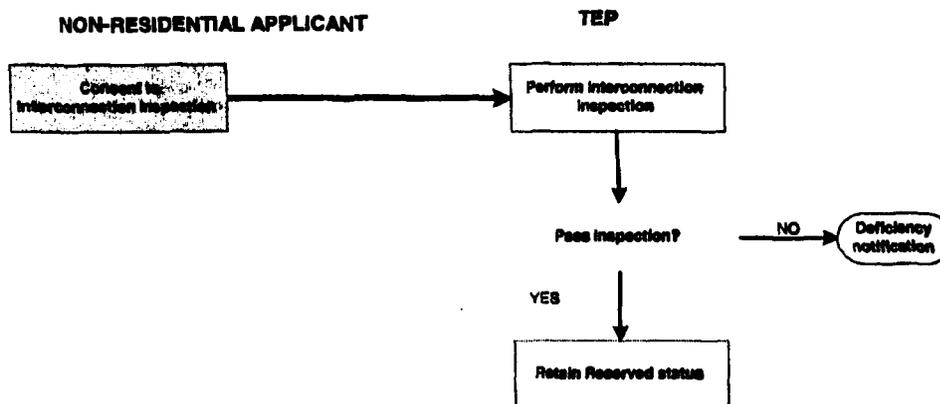
⁸ Applicants with off-grid projects would submit a different version of the reservation request.

Additional Technologies with Prescriptive Incentives

- A project agreement (between customer and installer);
- An executed installation agreement including all project participants;
- Building and/or construction permits and/or a full set of design development or construction drawings (80% or more complete);
- An executed interconnection agreement (if applicable); and
- A letter from customer committing to utility-accepted in-service date.

If proof of project advancement is not received within the specified timeframe, the customer will be notified that the reservation is cancelled. An appropriate written request for an extension may be requested if circumstances require. The applicant has the option to reapply for funding after the reservation has been cancelled. The request will be processed in the same manner as a new project reservation and will be contingent upon availability of funding at the time the new application is received.

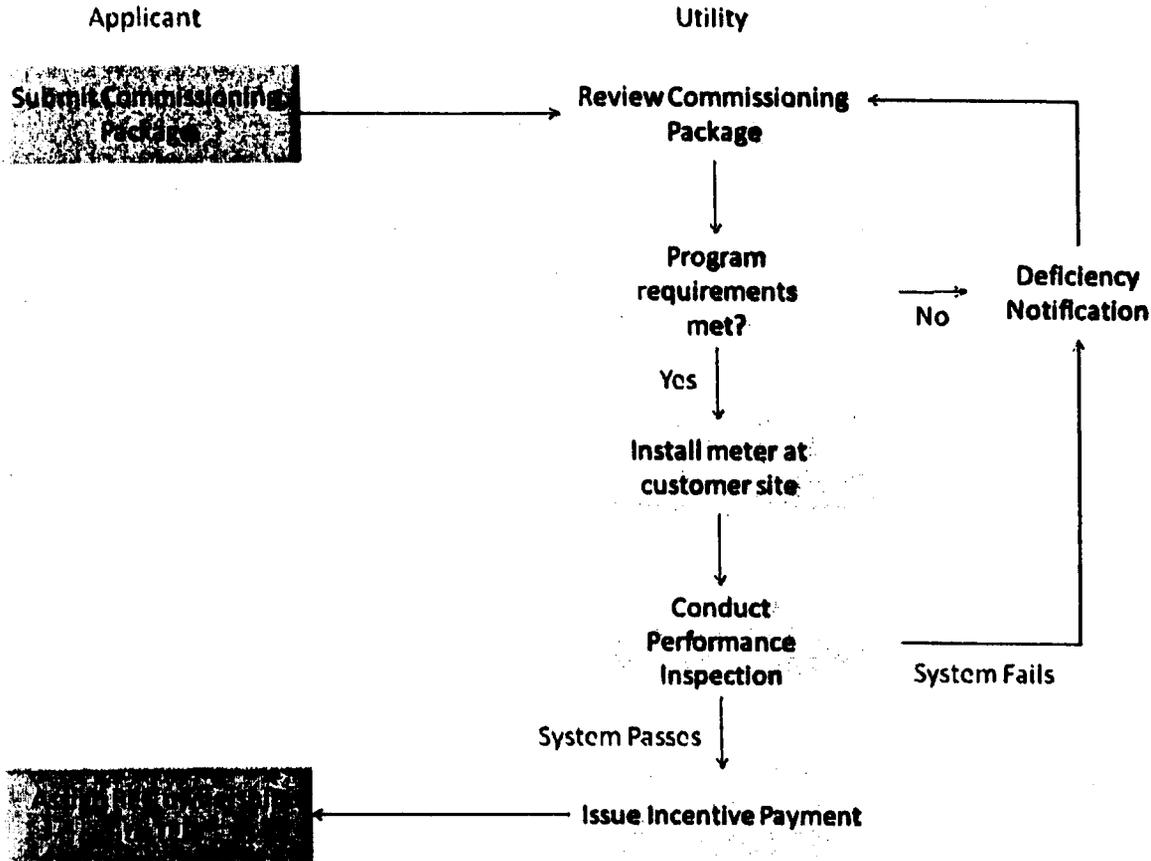
Step 3 – Interconnection Inspection (for Grid-Tied Qualifying Systems with capacity larger than 100 kW)



Non-residential grid-tied qualifying systems of electrical generating capacity larger than 100 kW must submit to and pass an interconnection inspection before the system can be commissioned. TEP conducts the interconnection inspection and will notify the applicant of the results of the inspection. If the system passes the interconnection inspection, the application retains the reservation. The applicant can keep the reservation even if the system fails the initial interconnection inspection, as long as the deficiency is remedied within 120 days from the date of the reservation confirmation, as described in Step 2.

Additional Technologies with Prescriptive Incentives

Step 4 – System Commissioning For Non-Residential Systems Larger Than 100 kW



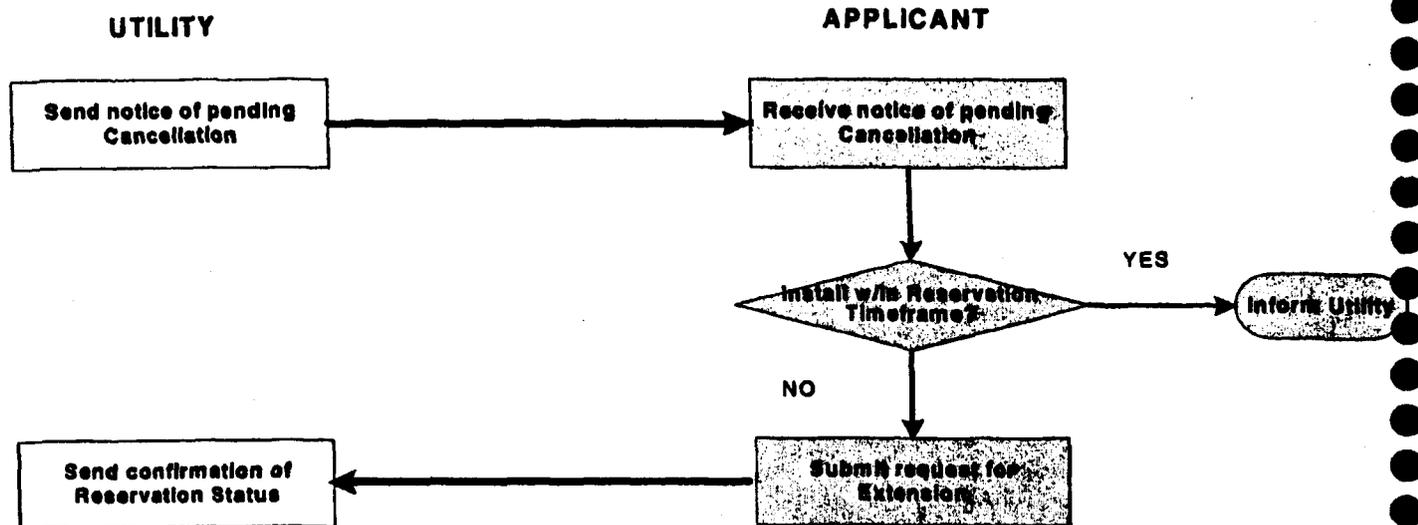
After the Non-Residential system larger than 100 kW has been commissioned, the applicant must submit a commissioning package to TEP. TEP will review the commissioning package and confirm that all program requirements have been met, including passing the interconnection inspection.

After receiving the commissioning package, TEP will dispatch a TEP representative to install the meter at the system site. The meter will be certified according to the TEP standards. The customer must provide access to the site during normal business hours so that the TEP representative can install the meter.

In addition, TEP may, at its discretion, perform a conformance inspection of the system. TEP will notify the applicant of the scheduled conformance inspection and the applicant must make the system available for inspection. In most cases in which a conformance inspection is conducted, an incentive payment may not be issued until after a qualifying system has passed the conformance inspection.

Additional Technologies with Prescriptive Incentives

Conditional Step - Extension / Cancellation



If all project requirements are not met within 365 days of the date of the reservation confirmation, the applicant must apply for an extension to remain eligible for the incentive. TEP will trigger this request for extension with a notice of the pending cancellation 60 days prior to the date of scheduled cancellation. TEP will grant an extension for up to 90 days following timely receipt of a customer's request for extension. TEP may approve written extension requests detailing the conditions for delay for periods beyond 90 days under extenuating circumstances, or for systems larger than 1 MW.

If all program requirements have not been met within the reservation timeframe, a reservation request will be cancelled unless an extension is granted.

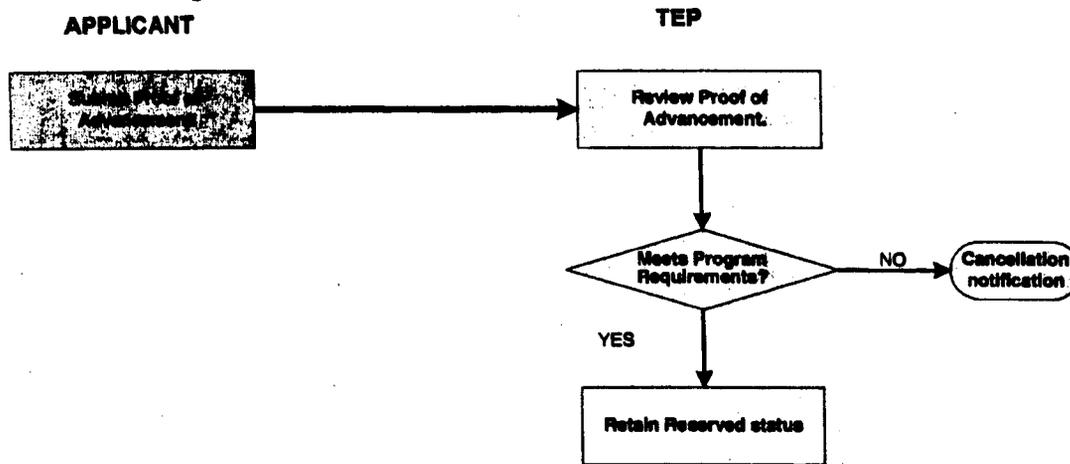
Additional Technologies with Prescriptive Incentives

Step 5 – Incentive Payment is Disbursed

Non-residential systems larger than 100 kW are eligible for a performance-based incentive (“PBI”). All PBI Project Agreements will include the following terms:

1. A project agreement between the applicant(s) and TEP that details the assignment of energy and RECs and the assignment of payment must be completed before payments can be disbursed.
2. At a minimum, quarterly meter reads will be performed by TEP and quarterly payments will be made to the assigned payee within 30 days of the meter reading based on quarterly kWh production. If the payment due is less than \$25.00, it will be held for the next payment period.
3. PBI payments will begin with the first quarterly production following receipt of the completed system commissioning package and conformance inspection, if required, and continue for the life of the agreement term. As part of this provision, it is understood that systems commissioned mid-quarter will receive payment only for the production of that partial quarter.

TEP’s payment of a PBI will assure TEP complete and irrevocable ownership of the REC for the full duration of the PBI agreement. The agreement duration must fully coincide with the PBI payment schedule and the system must be supported by system warranty or planned maintenance schedules for the term of the agreement.



INCENTIVE LEVELS FOR ADDITIONAL TECHNOLOGIES

The additional distributed energy technologies in residential and small commercial applications are eligible for performance-based incentives (“PBIs”). The PBI allows the customer to collect incentive payments in direct relation to the actual system production. These incentive levels are specific to each of the groups of technologies. Table 8 summarizes the incentive levels for these technologies for REC agreements signed in 2010 or 2011; Table 9 summarizes the incentive levels for these technologies for REC agreements signed in 2012, 2013, or 2014.

In all cases, incentive values listed in Table 8 and Table 9 are maximum values. PBIs are awarded through a bid process, which is discussed later in this section. Applicants are encouraged to submit bids requesting incentive amounts less than the maximums listed. Bids requesting a lower level of incentive

Additional Technologies with Prescriptive Incentives

payment than the maximum will have an increased chance of acceptance in the allocation ranking process.

Table 8. Maximum Incentives for Additional Technologies for 2010 and 2011

| Technology/Application | 10-Year Agreement Signed in 2010-11* (\$/kWH) | REC | 15-Year Agreement Signed in 2010-11* (\$/kWH) | REC | 20-Year Agreement Signed in 2010-11* (\$/kWH) | REC |
|--|--|-----|--|-----|--|-----|
| Biomass/Biogas (Electric) | \$0.060 | | \$0.056 | | \$0.054 | |
| Biomass/Biogas – CHP (Electric) ³ | \$0.035 | | \$0.032 | | \$0.031 | |
| Biomass/Biogas – CHP (Thermal) ³ | \$0.018 | | \$0.017 | | \$0.016 | |
| Biomass/Biogas (thermal) | \$0.015 | | \$0.014 | | \$0.013 | |
| Biomass/Biogas (cooling) | \$0.032 | | \$0.030 | | \$0.029 | |
| Geothermal – (electric) | \$0.024 | | \$0.022 | | \$0.022 | |
| Geothermal – (thermal) | \$0.048 | | \$0.045 | | \$0.043 | |
| Small Hydro | \$0.060 | | \$0.056 | | \$0.054 | |
| Solar Space Cooling | \$0.129 | | \$0.120 | | \$0.115 | |
| Non-Residential Pool Heating | \$0.012 | | \$0.011 | | \$0.011 | |

Notes:

*Indicates that the incentive for 2011 has not yet been approved by the Arizona Corporation Commission (“ACC” or the “Commission”). As such, these incentives are tentative and may change pending ACC approval.

- There is no incentive cap for non-residential systems other than annual program funding considerations.
- A PBI cannot exceed 60% of the real project costs, defined as the undiscounted total system cost plus acceptable financing charges. Acceptable finance charges are finance charges used for the PBI incentive cap calculation and cannot exceed the current prime interest rate plus 5%. Financing charges must be disclosed as part of the commissioning package, if not disclosed before.
- The customer must pay at least 15% of the project cost, after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- The CHP incentives may be used in combination for the appropriate components of one system.
- The solar space heating and cooling incentives may be used in combination for the appropriate components of the system.
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.
- The process for determining annual kWh savings for commercial solar pool heaters is this:
 1. Determine whether or not the system has an OG-100 rating. If it does not, it is not eligible for the program.
 2. If it does have an OG-100 rating, find an OG-300 rating for comparable set of collectors.
 3. Use Tucson data to find rated annual heat production for domestic water. (This calculation assumes 300 days on which useful heat is produced.)
 4. Multiply the annual savings determined by the OG-300 rating by (180/300). This adjustment reflects the fact that pool heaters in Tucson realistically only produce useful heat on 180 days each year.
 5. The result is anticipated annual kWh savings for the unit. This is multiplied by PBI level to calculate annual incentive. TEP will retain the right to meter the system.

Additional Technologies with Prescriptive Incentives

Table 9. Maximum Incentives in 2012-2014 for Additional Technologies

| Technology/Application | 10-Year Agreement Signed in 2012-14* (\$/kWh) | REC | 15-Year Agreement Signed in 2012-14* (\$/kWh) | REC | 20-Year Agreement Signed in 2012-14* (\$/kWh) | REC |
|--|--|-----|--|-----|--|-----|
| Biomass/Biogas (Electric) | \$0.060 | | \$0.056 | | \$0.054 | |
| Biomass/Biogas – CHP (Electric) ³ | \$0.035 | | \$0.032 | | \$0.031 | |
| Biomass/Biogas – CHP (Thermal) ³ | \$0.018 | | \$0.017 | | \$0.016 | |
| Biomass/Biogas (thermal) | \$0.015 | | \$0.014 | | \$0.013 | |
| Biomass/Biogas (cooling) | \$0.032 | | \$0.030 | | \$0.029 | |
| Geothermal – (electric) | \$0.024 | | \$0.022 | | \$0.022 | |
| Geothermal – (thermal) | \$0.048 | | \$0.045 | | \$0.043 | |
| Small Hydro | \$0.060 | | \$0.056 | | \$0.054 | |
| Solar Space Cooling | \$0.129 | | \$0.120 | | \$0.115 | |
| Non-Residential Pool Heating | \$0.012 | | \$0.011 | | \$0.011 | |

Notes:

*Indicates that the incentives for 2012, 2013, and 2014 have not yet been approved by the Arizona Corporation Commission (“ACC” or the “Commission”). As such, these incentives are tentative and may change pending Commission approval.

- There is no incentive cap for non-residential systems other than annual program funding considerations.
- A PBI cannot exceed 60% of the real project costs, defined as the undiscounted total system cost plus acceptable financing charges. Acceptable finance charges are finance charges used for the PBI incentive cap calculation and cannot exceed the current prime interest rate plus 5%. Financing charges must be disclosed as part of the commissioning package, if not disclosed before.
- The customer must pay at least 15% of the project cost, after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- The CHP incentives may be used in combination for the appropriate components of one system.
- The solar space heating and cooling incentives may be used in combination for the appropriate components of the system.
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.
- The process for determining annual kWh savings for commercial solar pool heaters is this:
 1. Determine whether or not the system has an OG-100 rating. If it does not, it is not eligible for the program.
 2. If it does have an OG-100 rating, find an OG-300 rating for comparable set of collectors.
 3. Use Tucson data to find rated annual heat production for domestic water. (This calculation assumes 300 days on which useful heat is produced.)
 4. Multiply the annual savings determined by the OG-300 rating by (180/300). This adjustment reflects the fact that pool heaters in Tucson realistically only produce useful heat on 180 days each year.
 5. The result is anticipated annual kWh savings for the unit. This is multiplied by PBI level to calculate annual incentive. TEP will retain the right to meter the system.

Additional Technologies with Prescriptive Incentives

System Cost for a solar space heating system will not include the cost of any passive thermal storage or the cost of the building heating system itself. It will include the cost of new materials and installation of active thermal storage, expansion tanks, controls, tempering valves, piping, vents, drains, safety valves and all freeze protection.

The incentive amount will be calculated at the time the application is approved for reservation. If federal or state incentives change during the period of time after the reservation approval, the incentive amount reserved will not be changed as long as the reservation is not cancelled.

TEP's payment of a PBI will assure TEP complete and irrevocable ownership of the REC for the full duration of the PBI agreement. The agreement duration must fully coincide with the PBI payment schedule and the system must be supported by system warranty or planned maintenance schedules for the term of the agreement.

PROJECT FUNDING

Non-residential funds will be committed as bids are accepted; funds will not be placed in reserve for later in the year. As a result, the budget may be committed before the end of the year. Funds will be made available to projects based on a ranking generated by lowest expected life cycle credit purchase cost as provided in the application and verified by TEP, as well as likelihood of construction. Projects submitted to the utility for reservation will be ranked based on a calculated index value for purposes of allocating non-residential funds as proposed in the application and verified by TEP. Lowest lifecycle cost projects will be funded first. Indexing of the non-residential projects will be performed based on the verified incentive values and duration of the proposed agreement in the application for that project. In addition, the bid evaluator assesses the likelihood that the project will be completed. Projects with higher incentive payments result in a higher expected life cycle credit purchase cost and projects that produce more kWh result in a lower expected life cycle credit purchase cost. In the event of a tie in the ranking, when the program would be fully subscribed if both projects were given reservation status, funds will be awarded based on the date of receipt of the completed reservation request.

Reservation requests will be reviewed by the utility on a monthly basis. Once reservation requests are fully ranked each month, notification of reservation approvals and rejections will be made in conformance with the rankings and available funding.

Funds unused in one period will be equally divided among the remaining periods in that year. Funds allocated to non-residential projects will not roll forward from one year to the next. Reservations which are rejected as a result of insufficient program funds may elect to carry forward into the next period and retain the original reservation date. The election must be made at the time of the original application.

Additional Technologies with Prescriptive Incentives

THE FINE PRINT

In addition to the other requirements described in this hand book, there are two other types of program details of which system owners and installers should be aware:

1. Installer qualifications
2. System removal

These are described in further detail below.

Installer Qualifications

All systems receiving incentives under the RECPP must be installed by a qualified installer. The following requirements must be submitted by the applicant as part of the reservation request. TEP will verify that the installer meets the following minimum qualifications prior to confirming a reservation request:

3. The installer must possess a valid license on file with the Arizona Registrar of Contractors ("AZROC") with a license classification appropriate for the technology being installed. Alternatively, the installer must identify use of a contractor holding an appropriate license on file with the AZROC for the technology being installed. A copy of the AZROC license must be provided as part of the reservation request.
4. The installer must possess an Arizona business license that is active and in good standing.

Installers may request that the above information be retained on file with TEP; however, under this option the installer must certify that the information on file remains current with the submission of each reservation request. Information on file must be renewed yearly.

System Removal

If receiving a PBI, the Qualifying System or any components thereof shall not be removed from the premises until the last day of the final month of the final full calendar year of the applicable incentive payment term in the Agreement following completion of system installation of the renewable energy system, without express agreement from TEP. If the Qualifying System is removed in violation of this provision, customer shall immediately reimburse TEP all incentive amounts paid by TEP to customer or on behalf of customer to an authorized third party.

In addition, if a Qualified System is removed, TEP shall monitor that specific customer site to ensure that an additional incentive is not provided for any new distributed renewable energy resource system on that site until the REC contracted operational life of the original system has been completed.

TEP shall attempt to monitor the number of missing or non-working distributed generation systems and shall summarize its observations in its annual Compliance Report.

Additional Technologies with Prescriptive Incentives

Attachment A

Qualifications for Biomass/Biogas or Geothermal Space Heating, Process Heating or Space Cooling: Non-Residential Applications

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement, which is in conflict with a site-specific governmental requirement, shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Equipment Qualifications

1. Biomass/Biogas or geothermal system installations involving a regulated boiler or pressure vessel are required to comply with all Arizona state boiler regulations; provide a qualifying boiler inspection identification number; and keep all applicable permits in good standing.
2. Energy savings and designed output for the system will be verified by submitting either a testing certification for a substantially similar system prepared by a publicly funded laboratory or by submitting an engineering report stamped by a registered professional engineer. The engineering report shall provide a description of the system and major components, design criteria and performance expectations, applicable standards and/or codes, and a brief history of components in similar applications.
3. Energy production for space heating, space cooling and process heating will be calculated as one kWh of energy per 3,415 Btu of useful heat delivered by the system as measured by a dedicated heat delivery measuring meter and used by the building space or process.
4. The system will have a material and labor warranty of at least five years.
5. The system must meet Arizona DEQ environmental standards.

Installation Guidance

Because of the individual nature of biomass/biogas or geothermal systems, care should be taken to make sure the system complies with all applicable permitting and regulatory requirements including, but not limited to, air emission standards and air permit regulations.

General Qualifications

1. The project must comply with applicable local, state, and federal regulations.
2. Products must be installed according to manufacturers' recommendations.
3. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.

Additional Technologies with Prescriptive Incentives

- 4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale.**
- 5. All major system components must be new and must not have been previously placed in service in any other location or for any other application.**
- 6. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production. Certain other non-electric renewable energy production systems, noted below, will require customer supplied metering for PBI payment calculation purposes.**
- 7. If the qualifying system is grid-tied, the system must meet Arizona Corporation Commission Interconnection Requirements for Self-Generation Equipment.
See <http://images.edocket.azcc.gov/docketpdf/0000074361.pdf> for these requirements.**

Additional Technologies with Prescriptive Incentives

Attachment B Qualifications for Biomass/Biogas, Hydro, or Geothermal Electric

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPEP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPEP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPEP-based requirement, which is in conflict with a site-specific governmental requirement, shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPEP program requirements:

Equipment Qualifications

1. Biomass/Biogas, Hydro or Geothermal system installations involving a regulated boiler or pressure vessel are required to comply with all Arizona state boiler regulations; provide a qualifying boiler inspection identification number; and keep all applicable permits in good standing.
2. System must include a dedicated performance meter to allow for monitoring of the amount of electricity produced.
3. Pre-operational/or pre-commissioning energy savings and design output for the system will be verified by submitting either a testing certification for a substantially similar system prepared by a publicly funded laboratory or by submitting an engineering report stamped by a qualified registered professional engineer. The engineering report shall provide a description of the system and major components, design criteria and performance expectations, applicable standards and/or codes, and a brief history of components in similar applications.
4. The system will have a material and labor warranty of at least five years.
5. The system must meet Arizona DEQ environmental standards.

Installation Guidance

Because of the individual nature of biomass/biogas hydro or geothermal systems, care should be taken to make sure the system complies with all applicable permitting and regulatory requirements including, but not limited to, air emission standards and air permit regulations.

General Qualifications

1. The project must comply with applicable local, state, and federal regulations.
2. Products must be installed according to manufacturers' recommendations.
3. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.
4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale.

Additional Technologies with Prescriptive Incentives

5. All major system components must be new and must not have been previously placed in service in any other location or for any other application.
6. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production. Certain other non-electric renewable energy production systems, noted below, will require customer supplied metering for PBI payment calculation purposes.
7. If the qualifying system is grid-tied, the system must meet Arizona Corporation Commission Interconnection Requirements for Self-Generation Equipment.
See <http://images.edocket.azcc.gov/docketpdf/0000074361.pdf> for these requirements.

Additional Technologies with Prescriptive Incentives

Attachment C Qualifications for Solar Space Cooling

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement, which is in conflict with a site-specific governmental requirement, shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Equipment Qualifications

1. The minimum cooling capacity of the system will be 120,000 BTU (10 tons) per hour.
2. Solar collector panels used will have a Solar Rating and Certification Corporation ("SRCC") OG-100 rating or laboratory documentation showing the panel energy output under controlled and replicable test conditions.
3. Energy savings and designed output for the system will be verified by submitting either a testing certification for a substantially similar system prepared by a publicly funded laboratory or by submitting an engineering report stamped by a registered professional engineer. The engineering report shall provide a description of the system and major components, design criteria and performance expectations, applicable standards and/or codes, and a brief history of components in similar applications.
4. System must include a dedicated performance meter to allow for monitoring of the amount of heat input to the thermal cooling device or system. Energy production will be calculated at one kW-hr per 3,415 Btu of metered heat delivered to the thermal cooling device or system.
5. The system will have a material and labor warranty of at least five years.
6. TEP reserves the right to modify standards as technology changes on a case by case basis, pending independent laboratory analysis, Professional Engineer ("PE") stamp, or TEP engineering analysis

Installation Guidance

1. The horizontal tilt angle of the collector panels should be between 20 and 60 degrees and an azimuth angle should be between +/- 45 degrees of south.
2. All systems should be installed such that the energy collection system is substantially unshaded and should have substantially unobstructed exposure to direct sunlight between the hours of 9:00 a.m. and 3:00 p.m.
3. The system installation should comply with the design manual.

Additional Technologies with Prescriptive Incentives

General Qualifications

1. The project must comply with applicable local, state, and federal regulations.
2. Products must be installed according to manufacturers' recommendations.
3. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.
4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale.
5. All major system components must be new and must not have been previously placed in service in any other location or for any other application.
6. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production. Certain other non-electric renewable energy production systems, noted below, will require customer supplied metering for PBI payment calculation purposes.
7. If the qualifying system is grid-tied, the system must meet Arizona Corporation Commission Interconnection Requirements for Self-Generation Equipment.
See <http://images.edocket.azcc.gov/docketpdf/0000074361.pdf> for these requirements.

Technologies Not Specifically Included in TEP's RECPP

Technologies without Technology Specific Criteria

Technology specific criteria have not yet been developed for the following qualifying technologies:

- Fuel Cells
- Other

For applicants requesting incentives for these technologies or for applicants requesting installation of a technology with specific project technology criteria, but where some criteria cannot be met, the applicant will need to submit design and output documentation.

Applicants installing these systems will, at a minimum, need to provide an energy savings and designed output report for the system. The report must include either a testing certification for a substantially similar system prepared by a publicly funded laboratory or an engineering report stamped by a qualified registered professional engineer. The engineering report and/or testing certification shall provide a description of the system and major components, design criteria and performance expectations, applicable standards and/or codes, and a brief history of components in similar applications. Additional information may be required as part of the RECPP requirements.

Non-Conforming Projects

Non-Conforming Projects

Non-conforming projects will be identified as the Program evolves. Incentive levels for such projects will be calculated based on TEP engineering analysis, independent laboratory analysis, and/or professional engineering ("PE") stamps. Non-conforming projects that prove combined economic and renewable energy value will be allowed appropriately calculated incentives within the RECPP.

Appendix 1: Incentive Summary Tables

Appendix 1: Incentive Summary Tables

RECPP – CONFORMING PROJECT INCENTIVE MATRIX

2010 and 2011 Program Year

| Technology/Application | UP FRONT INCENTIVE ¹ | 10-Year REC Agreement ² | 15-Year REC Agreement ² | 20-Year REC Agreement ² |
|---|--|------------------------------------|------------------------------------|---------------------------------------|
| | 20-Year REC Agreement | 10-Year Payment (\$/kWH) | 15-Year Payment (\$/kWH) | 20-Year Payment (\$/kWH) |
| BIOMASS/BIOGAS (Electric) | NA | 0.060 | 0.056 | 0.054 |
| BIOMASS/BIOGAS – CHP (Electric) ³ | NA | 0.035 | 0.032 | 0.031 |
| BIOMASS/BIOGAS – CHP (Thermal) ³ | | 0.018 | 0.017 | 0.016 |
| BIOMASS/BIOGAS (thermal) | NA | 0.015 | 0.014 | 0.013 |
| BIOMASS/BIOGAS (cooling) | NA | 0.032 | 0.030 | 0.029 |
| DAYLIGHTING (Non-Residential) | \$0.18/kWH ⁷ See this note for clarification | NA | NA | NA |
| GEOTHERMAL – (electric) | NA | 0.024 | 0.022 | 0.022 |
| GEOTHERMAL – (thermal) | NA | 0.048 | 0.045 | 0.043 |
| Ground Source Heat Pump – (cooling) | \$500/ton | NA | NA | NA |
| SMALL HYDRO | NA | 0.060 | 0.056 | 0.054 |
| SMALL WIND (grid-tied) ⁴ | \$2.25/Watt AC | NA | NA | NA |
| SMALL WIND (off-grid) ⁴ | \$1.80/Watt AC | NA | NA | NA |
| SOLAR ELECTRIC: | | | | |
| RESIDENTIAL (GRID-TIED) | \$3.00/Watt DC ⁴ | NA | NA | NA |
| Non-Residential (Grid-Tied) 100 kW or less | \$2.50/Watt DC ⁴ | NA | NA | NA |
| NON-RESIDENTIAL (GRID-TIED) | NA | 0.182 | 0.168 | 0.162 |
| More than 100 kW | | | | |
| RESIDENTIAL (OFF-GRID) | \$2.00/Watt DC ⁴ | NA | NA | NA |
| NON-RESIDENTIAL (OFF-GRID) | \$2.00/Watt DC ⁴ | NA | NA | NA |
| SOLAR SPACE COOLING ⁵ | NA | 0.116 | 0.108 | 0.104 |
| SOLAR WATER HEATING/SPACE HEATING ^{6,8,10} (Non-Residential, 35,000 annual kWh output production equivalent or less) | \$750 plus \$0.50/kWH | NA | NA | NA |
| RESIDENTIAL SOLAR WATER/SPACE HEATING (35,000 annual kWh output production equivalent or less) ^{6,8,10} | \$750 plus \$0.25/kWH | NA | NA | NA |
| NON-RESIDENTIAL POOL HEATING | NA | 0.012 | 0.011 | 0.011 |

Notes:

- 1) Residential projects are eligible for an up front incentive (UFI). UFI payments can not exceed 60% of the cost of renewable energy equipment.
- 2) Non-residential systems under 100 kW is a UFI but can be a PBI. Non-residential 100 kW and greater is PBI only. The total of payments under a production based incentive can not exceed 60% of the project costs for any project.
- 3) The CHP incentives may be used in combination for the appropriate components of one system.
- 4) This PBI applies to a maximum system size of 1 MW.
- 5) The solar space heating and cooling incentives may be used in combination for the appropriate components of one system.
- 6) This category includes both traditional water heating and those systems combined with residential solar water heating used for space heating. Space heating applications require a report detailing energy saving for the complete system.
- 7) Rate applies to measured first five years of energy savings only. Payments are made over a five year period.
- 8) Some UFI based installations will require an adjustment of the incentive as detailed in the PV Incentive Adjustment Chart.
- 9) Energy savings rating is based on the SRCC OG-300 published rating or the TEP-RECPP Space Heating Calculator. The customer contribution must be a minimum of 15% of the project cost after accounting for and applying all available Federal and State incentives.
- 10) Rate applies to forecast/measured first year energy savings only.

NA

Not

Available

Appendix 1: Incentive Summary Tables

RECPP – CONFORMING PROJECT INCENTIVE MATRIX

2012 through 2014 Program Year

| Technology/Application | UP FRONT 20-Year REC Agreement ¹ | 10-Year REC Agreement ² 10-Year Payment (\$/kWh) | 15-Year REC Agreement ² 15-Year Payment (\$/kWh) | 20-Year REC Agreement ² 20-Year Payment (\$/kWh) |
|---|---|---|---|--|
| BIOMASS/BIOGAS (Electric) | NA | 0.060 | 0.056 | 0.054 |
| BIOMASS/BIOGAS – CHP (Electric) ³ | NA | 0.035 | 0.032 | 0.031 |
| BIOMASS/BIOGAS – CHP (Thermal) ³ | NA | 0.018 | 0.017 | 0.016 |
| BIOMASS/BIOGAS (thermal) | NA | 0.015 | 0.014 | 0.013 |
| BIOMASS/BIOGAS (cooling) | NA | 0.032 | 0.030 | 0.029 |
| DAYLIGHTING (Non-Residential) | \$0.18/kWh ⁷ <small>See this note for clarification</small> | NA | NA | NA |
| GEOHERMAL – (electric) | NA | 0.024 | 0.022 | 0.022 |
| GEOHERMAL – (thermal) | NA | 0.048 | 0.045 | 0.043 |
| Ground Source Heat Pump – (cooling) | \$500/ton | NA | NA | NA |
| SMALL HYDRO | NA | 0.060 | 0.056 | 0.054 |
| SMALL WIND (grid-tied) ⁴ | \$2.25/Watt AC | NA | NA | NA |
| SMALL WIND (off-grid) ⁴ | \$1.80/Watt AC | NA | NA | NA |
| SOLAR ELECTRIC: | | | | |
| RESIDENTIAL (GRID-TIED) | \$3.00/Watt DC ⁸ | NA | NA | NA |
| Non-Residential (Grid-Tied) 20 kW or less | \$2.50/Watt DC ⁸ | NA | NA | NA |
| NON-RESIDENTIAL (GRID-TIED) | NA | 0.182 | 0.168 | 0.162 |
| More than 20 kW | | | | |
| RESIDENTIAL (OFF-GRID) | \$2.00/Watt DC ⁸ | NA | NA | NA |
| NON-RESIDENTIAL (OFF-GRID) | \$2.00/Watt DC ⁸ | NA | NA | NA |
| SOLAR SPACE COOLING ⁵ | NA | 0.116 | 0.108 | 0.104 |
| SOLAR WATER HEATING/SPACE HEATING ^{5,9,10} (Non-Residential, 35,000 annual kWh output production equivalent or less) | \$750 plus \$0.50/kWh | NA | NA | NA |
| RESIDENTIAL SOLAR WATER/SPACE HEATING (35,000 annual kWh output production equivalent or less) ^{5,9,10} | \$750 plus \$0.25/kWh | NA | NA | NA |
| NON-RESIDENTIAL POOL HEATING | NA | 0.116 | 0.108 | 0.104 |

Notes:

- 1) Residential projects are eligible for an up front incentive (UFI). UFI payments can not exceed 60% of the cost of renewable energy equipment.
- 2) Non-residential systems under 100 kW is a UFI but can be a PBI. Non-residential 100 kW and greater is PBI only. The total of payments under a production based incentive can not exceed 60% of the project costs for any project.
- 3) The CHP incentives may be used in combination for the appropriate components of one system.
- 4) This PBI applies to a maximum system size of 1 MW.
- 5) The solar space heating and cooling incentives may be used in combination for the appropriate components of one system.
- 6) This category includes both traditional water heating and those systems combined with residential solar water heating used for space heating. Space heating applications require a report detailing energy saving for the complete system.
- 7) Rate applies to measured first five years of energy savings only. Payments are made over a five year period.
- 8) Some UFI based installations will require an adjustment of the incentive as detailed in the PV Incentive Adjustment Chart.
- 9) Energy savings rating is based on the SRCC OG-300 published rating or the TEP-RECPP Space Heating Calculator. The customer contribution must be a minimum of 15% of the project cost after accounting for and applying all available Federal and State incentives.
- 10) Rate applies to forecast/measured first year energy savings only.
NA – Not Available

Appendix 1: Incentive Summary Tables

Appendix 2: Glossary of Terms

ACC – Arizona Corporation Commission.

AZROC – Arizona Registrar of Contractors.

Applicant – Utility customer of record for the Utility Revenue Meter located at the installation site; a builder of the structure (residential or non-residential) who will reserve and install the Qualifying system; or for an off-grid Qualifying System, the property owner for the installation site located within a Utility's service territory.

Arizona Business License – A business license issued by the ACC.

Cancelled – Reservation Status indicating that a Reservation has been terminated, funding is no longer allocated, and the utility has removed the reservation from the funding queue.

Cancellation – The termination of the Reservation.

Commissioned – Qualifying System certified to be in operation.

Commissioning Package – Written verification signed by the installer and the customer confirming that the system has been installed in conformance with the approved reservation and that the system is ready for operation.

Conforming Project – Any project utilizing a renewable technology listed in Attachment D.

Conformance Inspection – Inspection performed by the utility to verify that the system has been installed and operates in conformance with the Reservation application.

Customer – Utility customer of record for the Utility Revenue Meter located at the installation site or a builder of the structure (residential or non-residential) who will reserve and install the Qualifying System.

Extension – The extension of the Reservation Timeframe.

Installer – The entity or individual responsible for the installation of a qualifying system.

Interconnection Inspection – Inspection performed by the utility to confirm that the system can be safely interconnected to the power grid.

Non-Conforming Project – Non-conforming projects include, but are not limited to, projects with staged completion dates, multi-customer or multi-system projects, projects involving more than one technology, projects requiring new or unique agreement terms, projects with technologies for which qualification standards have not been developed or projects requiring non-standard timeframes.

Appendix 1: Incentive Summary Tables

Performance Based Incentive ("PBI") – Incentive based on a rate per actual kWh output or on equivalent kWh of energy savings.

Project Costs – System Costs plus financing costs.

Proof of Project Advancement – Documentation demonstrating that a project is progressing on schedule and is staged for Commissioning on or before the end of the Reservation Timeframe.

Qualifying System – Distributed renewable energy systems meeting the qualifications for production of qualified Renewable Energy Credits in Arizona acceptable to the Arizona Corporation Commission as they may be defined for affected utilities to meet any renewable energy standards.

Renewable Energy Credit ("REC") – One Renewable Energy Credit is created for each kWh, or kWh equivalent for non-generating resources, derived from an eligible renewable energy resource. RECs shall include all environmental attributes associated with the production of the eligible renewable energy resource.

Reservation – A dollar amount committed by the utility to fund a project if all program requirements are met.

Reservation Status – Indicator relating to approval or denial of a Reservation request. If a Reservation is approved, the Reservation Status is Reserved. If a Reservation request is denied, the Reservation Status is either Cancelled or Wait Listed.

Reserved – Status indicating the acceptance of a Reservation request.

Reservation Timeframe – The duration of the utility's funding commitment for a Reservation.

System Costs – Costs associated with the Qualifying System components, direct energy distribution, system control/metering, and standard installation costs directly related to the installation of the Qualifying System.

Up Front Incentive (UFI) – One time incentive payment based on system capacity or estimated energy kWh production rather than on measured system output.

Wait List – Status indicating Applicant has met program requirements, but the Utility has insufficient funding to commit to funding the project.



ORIGINAL

Tucson Electric Power Company

One South Church, PO Box 711
Tucson, Arizona 85702

RECEIVED

2011 JAN -3 P 1:03

December 30, 2010

AZ CORP COMMISSION
DOCKET CONTROL

Docket Control
Arizona Corporation Commission
1200 West Washington St.
Phoenix, Arizona 85007

Re: Docket No. E-01933A-10-0340
Tucson Electric Power Company vs. Viktor Polivka, Complainant

Attached please find a letter recently sent from Tucson Electric Power Company to Viktor Polivka, regarding his complaint.

If you have any questions, please call me at (520) 884-3664.

Sincerely,

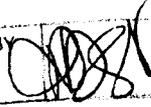


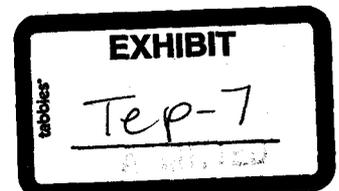
Melody Gilkey
Regulatory Counsel

cc: Belinda Martin, ACC
Jenny Gomez, ACC
Scott Hesla, ACC

Arizona Corporation Commission
DOCKETED

JAN 3 2011

DOCKETED BY 



TUCSON ELECTRIC POWER COMPANY

P. O. Box 711, DS502
Tucson, AZ 85702

Chris Lindsey
Energy Services Engineer

TEL. 520-918-8304
FAX 520-918-8350

December 29, 2010

Viktor Peter Polivka
4675 S. Harrison Rd. Lot #82
Tucson, AZ 85730

Re: Complaint #86554

Dear Mr. Polivka:

On November 10, 2010, Tucson Electric Power Company (TEP or Company) attended a Procedural Conference regarding your complaint (#86554). During the Procedural Conference, you requested a written explanation of the reasons for disqualification of your On-Grid Sunshare application, which was received by TEP in February 2010. TEP believes that the reasons for disqualifying your system were explained in emails and phone calls between you and TEP. However, the Company is happy to provide you with the written explanation you requested.

Both your On-Grid and Off-Grid Sunshare Applications for your existing 5.04 kilowatt (kW) roof-mounted photovoltaic (PV) system were reviewed by the Energy Services Engineering Department at TEP. Your On-Grid Application was not approved because of two outstanding conflicts with the Company's Arizona Corporation Commission approved 2010 Renewable Energy Credit Purchase Program (RECPP) requirements.

First, the PV system as installed does not meet Installation Requirement #10 of the 2010 RECPP. Requirement #10 states, "Storage Batteries are not allowed as part of the Customer System unless the inverter is a separate component and TEP can locate the Solar Meter at the inverter's output. If configured otherwise, battery losses will adversely reflect in the annual AC metered energy output. Customer's solar energy generation and energy storage system must meet the requirements of 2 and 3 of this Attachment A."

As discussed before, the issue is not with the Xantrex equipment, but rather how the battery backup system is configured. The Xantrex battery backup system as installed integrates the battery bank on the DC side of the system. The power created by the panels is either stored in the battery bank via a charge controller (DC-DC converter in this case) or sent on to the DC side of the inverter. This inverter then inverts DC to AC. Since TEP can only meter the output of the system on the AC side, there is no way to eliminate the losses associated with the battery bank from the metered values. TEP cannot pay a full incentive for a system like this because the Company would never realize the Renewable Energy Credits (REC) paid for; this is not a reasonable use of ratepayer funds. Moreover, as batteries age they become less efficient, requiring more and more energy from the solar system to keep them charged. With the battery bank located before the kilowatt hour (kWh) production meter, an unknown amount of energy will be produced by the system and never registered by the production meter because the energy will be going straight to the batteries.

Second, the PV system as installed does not meet Equipment Standard #7 in the 2010 RECPP. Equipment Standard #7 states "The Customer System and installation must meet the requirements of all federal, state and local building codes and have been successfully inspected by the building official having jurisdiction. Accordingly, the installation must be completed in accordance with the requirements of the latest edition of National Electric Code in effect in the jurisdiction where the installation is being completed (NEC), including, without limitation, Sections 200-6, 210-6, 230-70, 240-3, 250-26, 250-50, 250-112, all of Article 690 pertaining to Solar Photovoltaic Systems, thereof, all as amended and superseded."

To date, no final inspection and clearance from the City of Tucson has been conducted. While meeting this requirement will not cause your On-Grid Application to be approved, it would be required for finalization of your Off-Grid Application should you choose to pursue it. TEP is still willing to approve your Off-Grid Application as discussed earlier. Additionally, the Company is happy to work with you to resolve the existing issues outlined above should you wish to pursue your On-Grid Application.

Regards,



Chris Lindsey
Energy Services Engineer
Tucson Electric Power Co.
clindsey@tep.com

cc: Belinda Martin
Jenny Gomez
Scott Hesla

EXHIBIT 10

EXAMPLE PHOTOVOLTAIC GENERATION WITH BATTERY BACK-UP ONE-LINE DIAGRAM

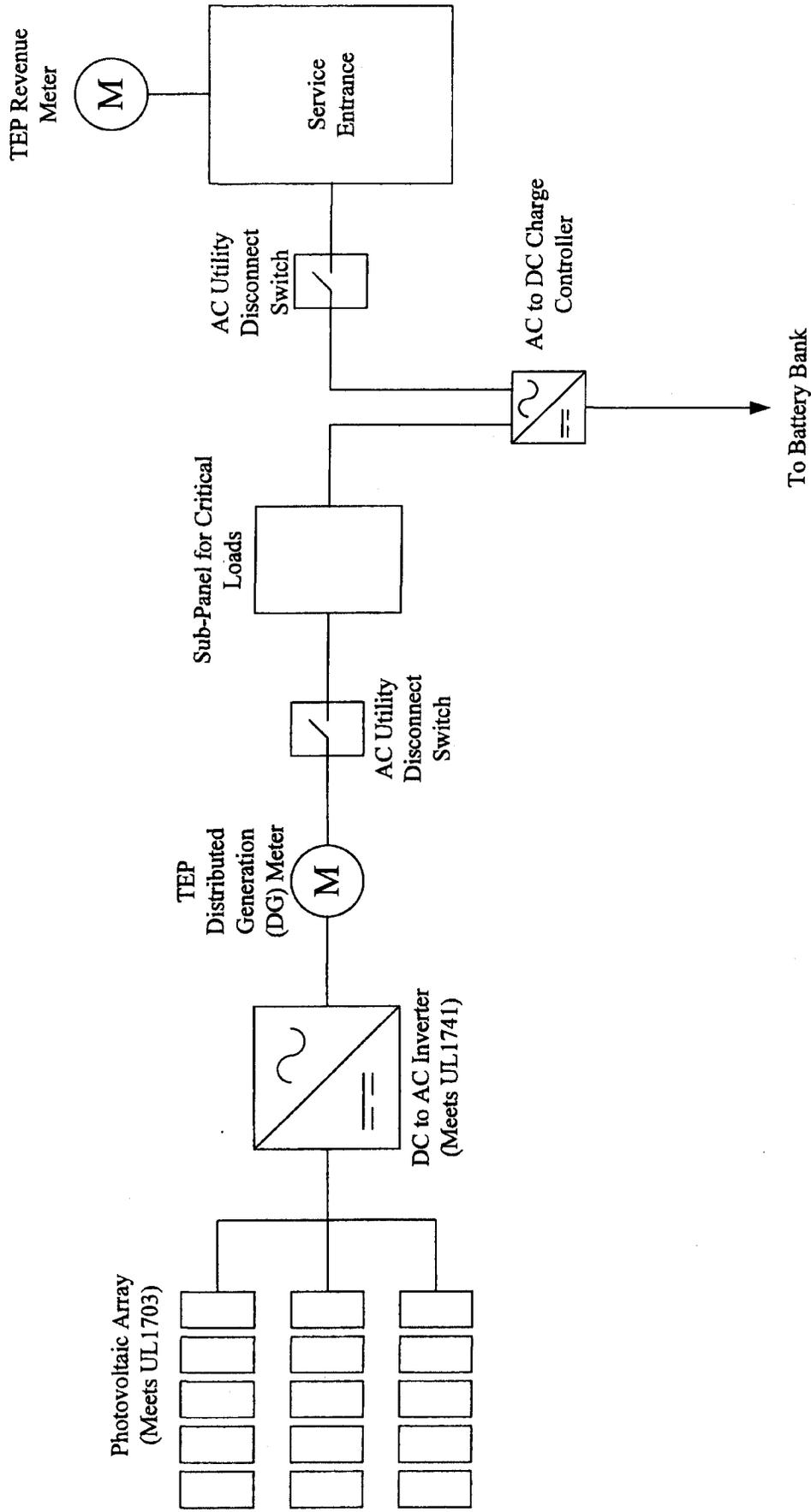


EXHIBIT
Tep-8

Anderson, Blanka

From: Anderson, Blanka
Sent: Thursday, April 22, 2010 1:52 PM
To: 'Viktor Peter'
Cc: Lindsey, Christopher
Subject: TEP's Position Letter



2010TEP_RECPPFin
al.url (214 B)...

Viktor: Good afternoon. I'm attaching the promised letter regarding the incentive for your PV system. I'm also attaching the link to the RECPP referenced in the letter.

I'll be here until 5:00 and then off to the vet to pick up my dog. Let me know if there's anything else I can do.

Blanka Anderson

The message is ready to be sent with the following file or link attachments:

Shortcut to: http://tep.com/Docs/RESTDocs/2010TEP_RECPPFinal.pdf

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.