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P.O. Box 711
Tucson, Arizona 85702

UniSourceEnergy
SERVICES

Arizona Corporation Commission
DOCKETED
JUL 15 2011
DOCKETED BY

July 15, 2011

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, AZ 85007

Re: UNS Electric, Inc. - REST Plan Summary and PowerPoint Presentation
Docket No. E-04204A-11-0267

Pursuant to Decision No. 72034 (December 10, 2010), UNS Electric, Inc. ("UNS Electric") is required to file a REST Plan summary and a PowerPoint presentation of the REST filing. Enclosed is the UNS Electric REST Plan summary and PowerPoint presentation of the Implementation Plan that was filed on July 1 in this docket. UNS Electric is also filing an electronic copy of the PowerPoint presentation directly with Arizona Corporation Commission Staff.

If you have questions or comments please contact me at (520) 884-3680.

Sincerely,

Jessica Bryne

Jessica Bryne
Regulatory Services

Enclosures: Compliance Report

cc: Steve Olea, Director, ACC
Compliance, ACC

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UNS Electric, Inc.

2012 REST Implementation Plan Summary

UNS Electric, Inc.'s 2012 Renewable Energy Standard Plan Summary

UNS Electric, Inc. ("UNS Electric" or "Company") has prepared its 2012 Implementation Plan ("Plan") in compliance with the Arizona Corporation Commission's ("Commission") Renewable Energy Standard ("RES") rules. UNS Electric is committed to reaching the RES Renewable Energy Requirements for 2012 and beyond, and the Plan sets forth the Company's cost-effective strategy for meetings its RES requirements. The key components of the Plan include the renewable energy resources the Company intends to add through 2016, the programs the Company plans to implement, the amount budgeted for each program and the customer funding and related RES surcharge under the Plan.

Specifically, UNS Electric must obtain 3.5% of its 2012 annual retail sales from renewable resources, 30% of which must come from Distributed Generation ("DG"). In order to meet these requirements, UNS Electric will utilize existing utility-scale renewable generation, Purchase Power Agreements ("PPA") with renewable developers, utility-owned renewable generation, and DG incentive programs; the resulting renewable portfolio will include solar and wind projects.

UNS Electric's Plan is designed to achieve 2012 RES compliance as cost effectively as possible. The estimated cost for 2012 RES related projects and programs is $9.5 million. Under the proposed incentive levels (which have been modified from the 2011 Plan) and anticipated renewable generation requirements, this amount is expected to remain relatively flat through 2016, with a five year total of $41 million. RES funding is necessary to cover the cost of utility-scale renewable generation, incentive payments for distributed generation resources, marketing expenses, program implementation, and administration costs. At this time, UNS Electric proposes recovery of approximately $9.5 million through the RES tariff.

UNS Electric's total renewable generation requirement for 2012 is 3.5% of retail sales (or 68,210 megawatt hours ("MWh")). The RES targets two resource categories, utility-scale generation and DG. For utility-scale generation, UNS Electric will meet this target through a combination of self-owned generation via the Bright Arizona Solar Buildout Plan, and PPAs

entered into by the Company. Currently, UNS Electric has a PPA for a project with Western Wind that was approved by the Commission on April 1, 2010. This project is located in the Kingman area and will generate an estimated 24,000 MWh of wind power and 850 MWh of solar power, annually. The Company also has a 5 MW solar PPA with Solon, along with a 1.2 MW utility-owned solar project built by Solon that will generate approximately 11,000 MWh annually and allow UNS Electric to meet and possibly exceed its utility-scale RES requirement in 2012.

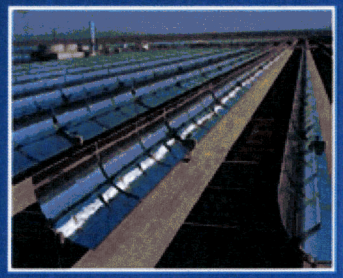
With respect to the DG portion of the requirement, UNS Electric proposes to continue successful implementation of its Renewable Energy Credit Purchase Program ("RECPP") and implement a School Vocational Program, a DG program that will provide photovoltaic ("PV") systems ranging in size up to ten kilowatts ("kW") to eligible schools in the service territory, along with education curriculum. The RECPP portion of UNS Electric's Plan targets three areas: (1) residential up-front incentives ("UFI"); (2) non-residential UFIs; and (3) non-residential performance based incentives ("PBI"). The projected cost of the RECPP is $5.5 million: $2.6 million for residential UFIs, $0.97 million for small commercial UFIs, and $1.8 million for large commercial PBIs. UNS Electric will fully satisfy the commercial portion of the RES DG requirement through its RECPP budget. The table below outlines the 2012 incentive budget for each customer segment, including the MWh and MW achieved.

Customer Segment	2012 Budget	Annual MWh	Annual MW
Residential UFI	$2,644,741	3,062	1.5
Small Commercial UFI	$971,584	1,225	0.7
Large Commercial PBI	$1,837,072	1,531	0.875

In conclusion, UNS Electric supports the goals of the RES and remains committed to achieving its targets. For more information on the Company's 2012 RES Plan, please see the full Plan filing, as made on July 1, 2011, in Docket Number E-04204A-11-0267.

UNS Electric, Inc.

2012 REST PowerPoint Presentation



2012 REST Implementation Plan

Tucson Electric Power Company

BRIGHT SOLUTIONS™

July 1, 2011

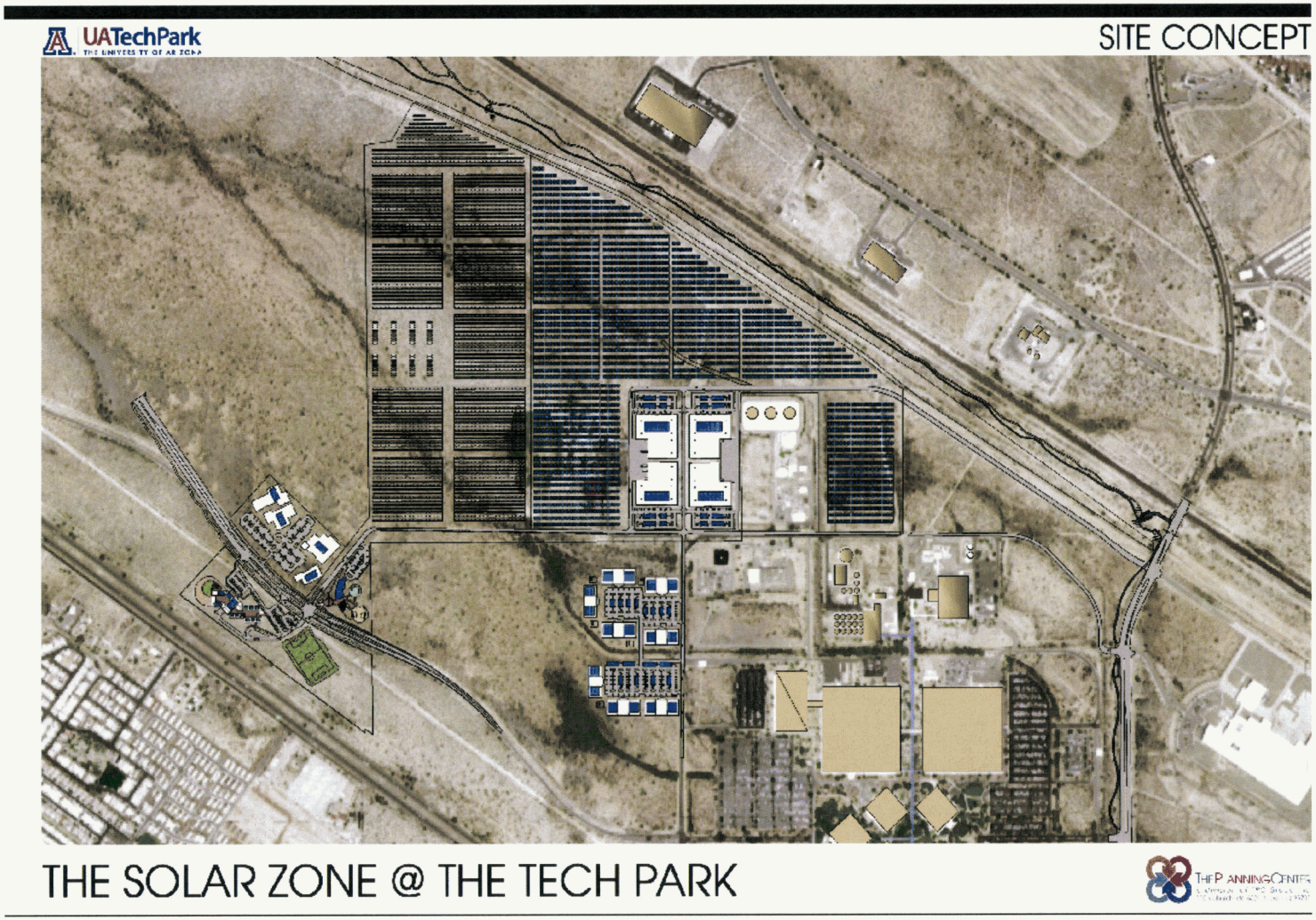
Agenda

- Utility Scale Overview
- Build-out Plan
- Residential Distributed Generation
- Commercial Distributed Generation
- Schools Vocational Program
- Research and Development
- 2012 Budget Overview

Utility Scale Generation

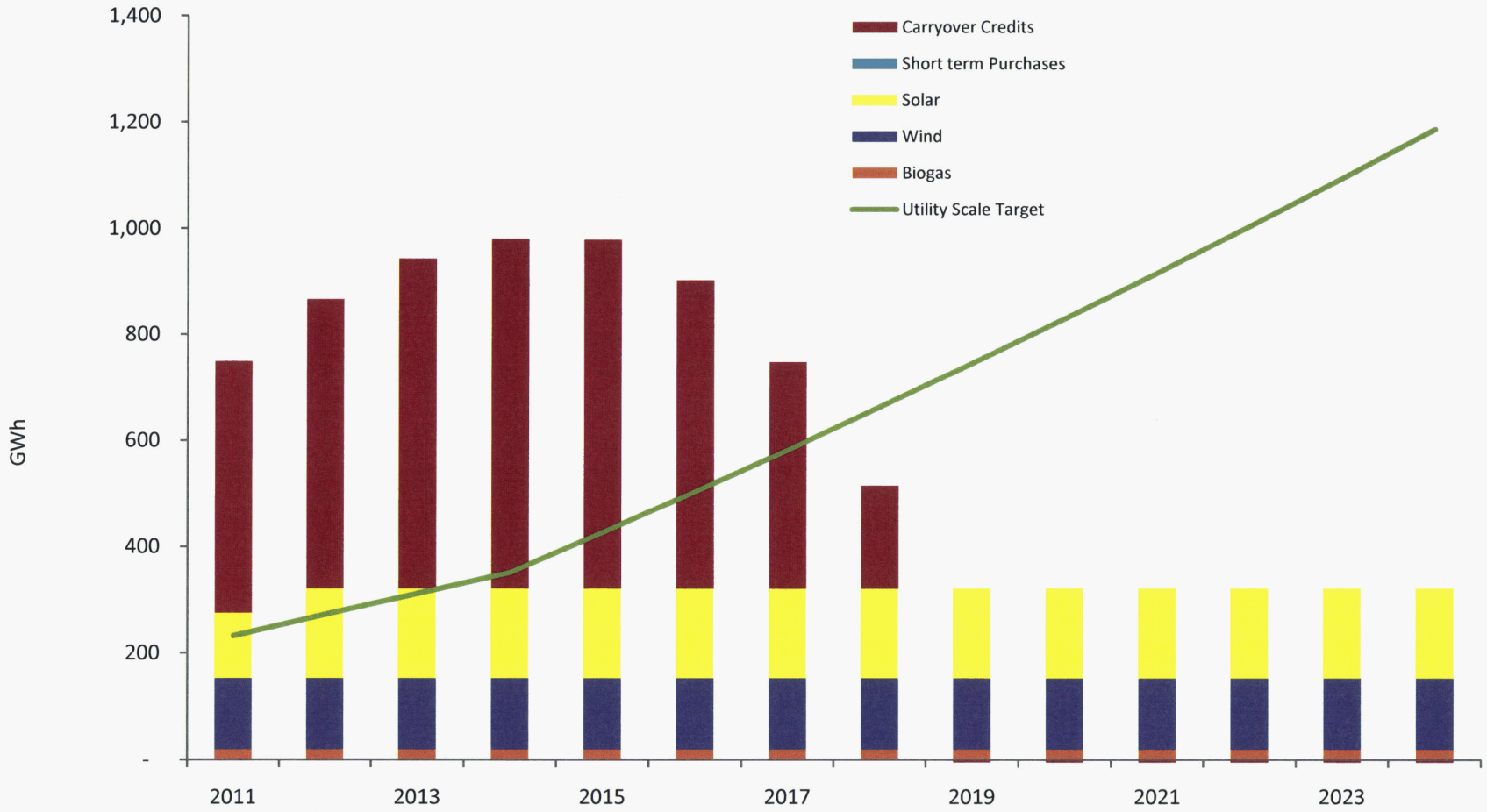
Existing Renewable Generation					
Project	**Capacity MW (AC)**	**Annual MWh**	**Technology**	**Expected In-Service Date**	**TEP Owned**
Biogas - Sundt	4	19,375	Biogas	Operational	Yes
SGS Solar	4.6	8,500	Fixed PV	Operational	Yes
SGS Solar Expansion	1.8	3,300	Fixed PV	Operational	Yes
SOLON Community Solar	1.6	3,500	SAT PV	Operational	Yes
Amonix Solar	1.6	3,500	CPV	Operational	No
Total Existing	**13.6**	**38,175**			
Bright Tucson Solar Buildout Plan					
Solon Solar & SunPower	6.4	14,016	SAT & Fixed PV	2011	Yes
Solon Solar & SunPower	6.4	14,016	SAT & Fixed PV	2012	Yes
SunPower & TBD	6.4	14,016	Fixed PV	2013	Yes
TBD	6.4	14,016	TBD	2014	Yes
Total Future - BTSBP	**25.6**	**56,064**			
Future Renewable Generation					
Torch Renewable Energy, LLC	50	133,300	Wind	2011	No
Amonix Solar	9.6	21,020	CPV	2011	No
CTC (First Light, LLC)	4	7,010	Fixed PV	2011	No
NRG Solar	20	43,800	Fixed PV	2011	No
Fotowatio Renewable Ventures	20	43,800	SAT PV	2012	No
ANS/EMCORE Solar	1.6	3,500	CPV	2012	No
Foresight Solar	3.2	7,010	SAT PV	2012	No
Foresight Solar	9.6	21,020	SAT PV	2012	No
Renewable Fuel LLC (Bell IPC)	5.5	17,600	Solar Thermal	2013	No
Sexton Energy	2.2	15,400	Bio-Mass	2013	No
Avalon Solar	28	61,320	Fixed PV	2013	No
Total Future - Pending	**187.8**	**280,460**			
Total Planned Generation	**227**	**374,699**			
Total Planned Generation thru 2012	**144.4**	**271,337**			

UA Tech Park Conceptual Layout



UA Tech Park – Completed Projects

REST Compliance (25% Attrition)



Build-out Plan

- Balance the utility scale portfolio – expect 20% owned
- Continue to invest approximately $28 M per year
- Financial project certainty
- Competitive Procurement
- Recovery of Revenue Requirement through REST
  - Same as current TEP, APS and UNSE Programs

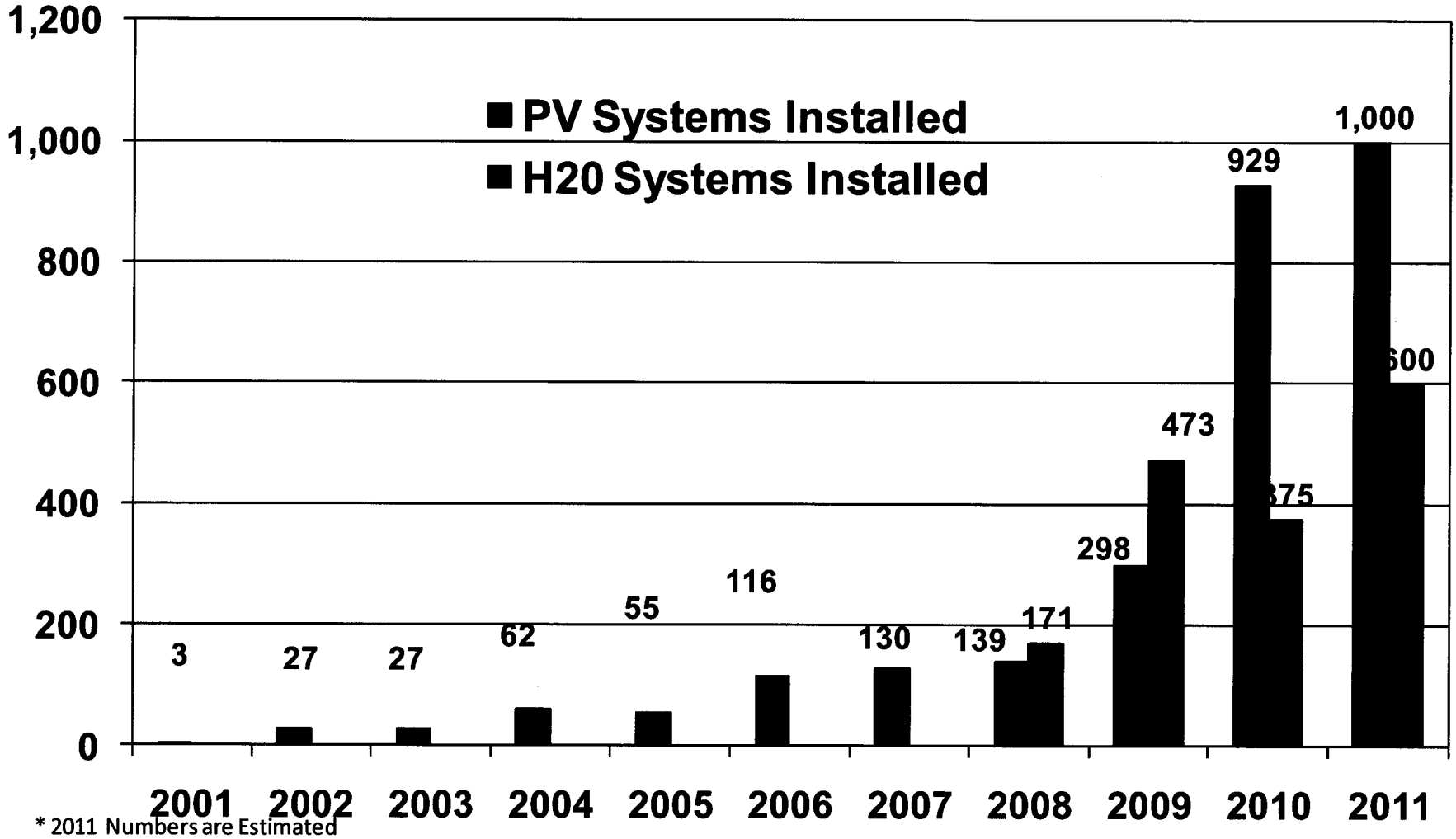
Utility Owned Solar Projects by Year	2012	2013[1]	2014	2015
2011 - 3.4 MW	$1,655	$791		
2012 - 7 MW built in 2011	$2,513	$1,371		
2013 - 7 MW built in 2012		$1,667		
2014 - 7 MW built in 2013			$3,452	$3,249
2015 - 7 MW built in 2014				$3,451
Annual Revenue Requirement	**$4,168**	**$3,829**	**$3,452**	**$6,701**

Residential Distributed Generation

- Up front incentive
  - Separate technology buckets
    - PV and other/solar water heating
  - Starting @ $1.75 per watt in Q1 for PV – max 30 watt DC system
  - 60% trigger by 6/30/2012 and incentive drops to $1.50
  - Hot water incentives simplified - $0.50/kWh up to $1750
  - Residential leases drop to $1.00

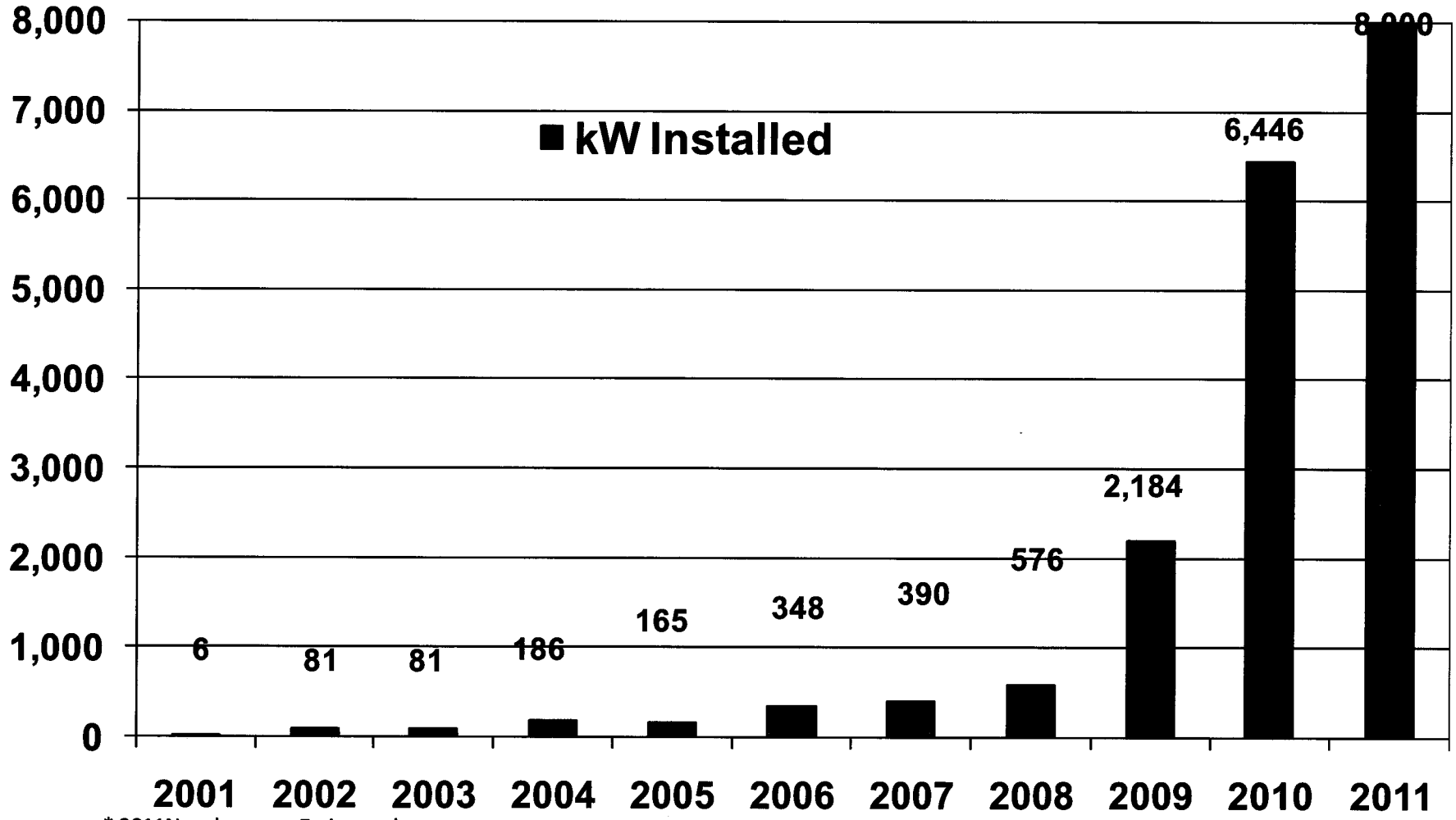
    Leasing entities do not require same subsidies as they utilize commercial tax incentives from Federal and State programs, depreciation (including bonus depreciation), and customer revenue streams. Allows ratepayers to reduce subsidies.

Residential Distributed Generation



* 2011 Numbers are Estimated

Residential Distributed Generation



* 2011Numbers are Estimated

Commercial Distributed Generation

- Up front incentive
  - Separate technology buckets
    - PV and other (solar water heating, etc…)
  - 70 kW DC limit for PV
  - Starting @ $1.50 per watt in Q1 for PV – max 70 watt DC system
  - 60% trigger by 6/30/2012 and incentive drops to $1.25
  - Hot Water UFI size limit remains at 400,000 kWh
- Performance Based incentive
  - Bidding timeframes by size (monthly, quarterly)
  - MW and/or dollar target range
  - 70 – 200kw = $0.125, 200kw – 400kw = $0.105, 401kw + = $0.91

Commercial Distributed Generation

UFI	# Installed	kW	# Reserved	kW Reserved
2006	2	13.2	0	0
2007	1	7.5	0	0
2008	9	139.92	0	0
2009	14	130.09	0	0
2010	18	480	46	2,523
2011*	20	1,500	30	2,200
Total	**64**	**2,270.1**	**76**	**4,723**
PBI	**# Installed**	**kW**	**# Reserved**	**kW Reserved**
2008	1	750	0	0
2009	9	1,242	7	2,624
2010	6	5,051	13	3,660
2011*	12	5,000	8	2,000
Total	**28**	**12,043**	**28**	**8,284**

*2011 Data is an estimate

Schools Program

- Continuation from 2011 – extremely successful
- System donations between 5kW – 10 kW
- Educational program developed and provided to schools
- Approximately half of area high schools received system
- 13 schools from the following districts:
  - TUSD
  - Vail
  - Amphitheatre
  - Flowing Wells
  - Catalina Foothills
  - AZ School for Deaf & Blind
  - Marana

Research and Development

- University Research – AzRISE
- Technical testing and training – TEP Test Yard
- Grid integration Studies
  - Electric Power Research Institute Plan and Transmission Variable Generation Integration Study (2 year study – 2011 & 2012)

Research and Development Initiatives	Budget
AZRise Research	$ 250,000
TEP Test Site	$ 350,000
EPRI and Transmission Integration Studies	$ 341,000
Total	**$ 941,000**

Total Budget Comparisons

	2012	2011
Total REST Budget & Tariff Collection 2012:	$ -	$ -
Utility Scale Energy	$ 17,651,418	$ 6,301,943
Customer Sited Distributed Renewable Energy:	$ 22,165,067	$ 24,646,341
Technical Training:	$ 750,000	$ 886,000
Information Systems Integration Costs [11]	$ 500,000	$ 425,000
Metering:	$ 227,982	$ 486,685
Program Labor and Administration	$ 1,732,859	$ 1,795,000
Renewable Energy Research and Development:	$ 956,000	$ 1,065,000
Total Other	$ -	$ 277,420
Program Cost (Total Budget)	$ 43,983,326	$ 35,883,389
Carryover of REST Funds	$ (4,875,000)	
Grand Total (to be collected from tariff)	$ 39,108,326	$ 35,883,389

Tariff

Rate Class	2011 Approved REST Budget	2012 Proposed REST Budget
Residential	$15,905,197	$17,393,069
Small Commercial	$10,441,814	$11,451,735
Large Commercial	$6,781,882	$6,083,266
Industrial & Mining	$1,793,166	$3,103,622
Public Authority	$729,519	$815,757
Lighting (PSHL)	$232,786	$262,759
Total	**$35,884,324**	**$39,110,208**

Rate Class	Current Rates Caps	Proposed Rates Caps
Residential	$4.50	$5.00
Small Commercial	$160.00	$178.00
Large Commercial	$1000.00	$1,110.00
Industrial & Mining	$5,500.00	$6,130.00
Public Authority	$180.00	$200.00
Lighting (PSHL)	$160.00	$178.00
Per kWh to all Classes	**$0.007121**	**$0.007698**

UNS Electric 2011 REST IP

UNSE Utility Scale

Bright Arizona Solar Buildout Plan					
Solon Solar - La Senita	1	2,190	SAT PV	2011	Yes
TBD	1	2,190	SAT PV	2012	Yes
TBD	1	2,190	SAT PV	2013	Yes
TBD	1	2,190	TBD	2014	Yes
Total Future - BASBP	**4**	**8,760**			
Total UNSE Owned Projects	**4.0**	**8,760**			
Future Renewable Generation					
Torch Renewable Energy, LLC	10	26,280	Wind	2011	No
Solon Solar - BMGS	4	8,760	SAT PV	2012	No
Solon Solar - TBD	4	8,760	CPV	2012	No
Total Future - Pending	**18**	**43,800**			
Total Expected Generation thru 2012	**22.0**	**52,560**			

Build-out Plan

- Balance the utility scale portfolio
- Financial project certainty
- Competitive Procurement
- Approved in UNSE's last Rate Case

Utility Owned Solar Projects by Year	2012	2013	2014	2015
2012	$665,169	$157,048		
2013		$166,293		
2014			$665,169	$628,193
2015				$665,169
Annual Revenue Requirement	$665,169	$323,341	$665,169	$1,293,362

Community Solar Program

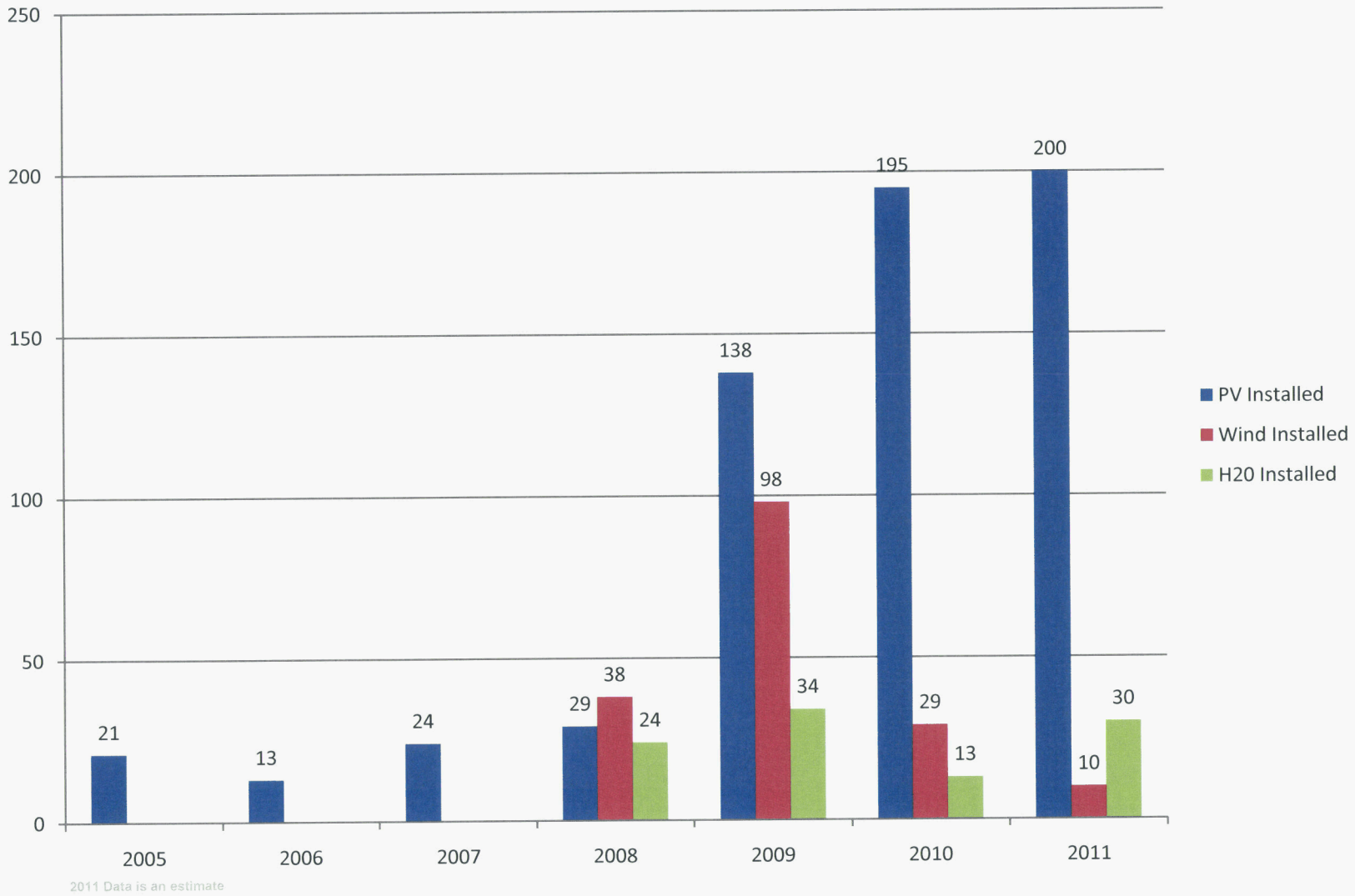
- Expected rollout following completion of La Senita solar project
- Solar energy available in 150 kWh blocks
- No up-front cost to customer
- $0.02 Solar Energy Premium - $3 per month per block
- Energy rate fixed
- Combination of utility owned and/or PPA's

Residential Distributed Generation

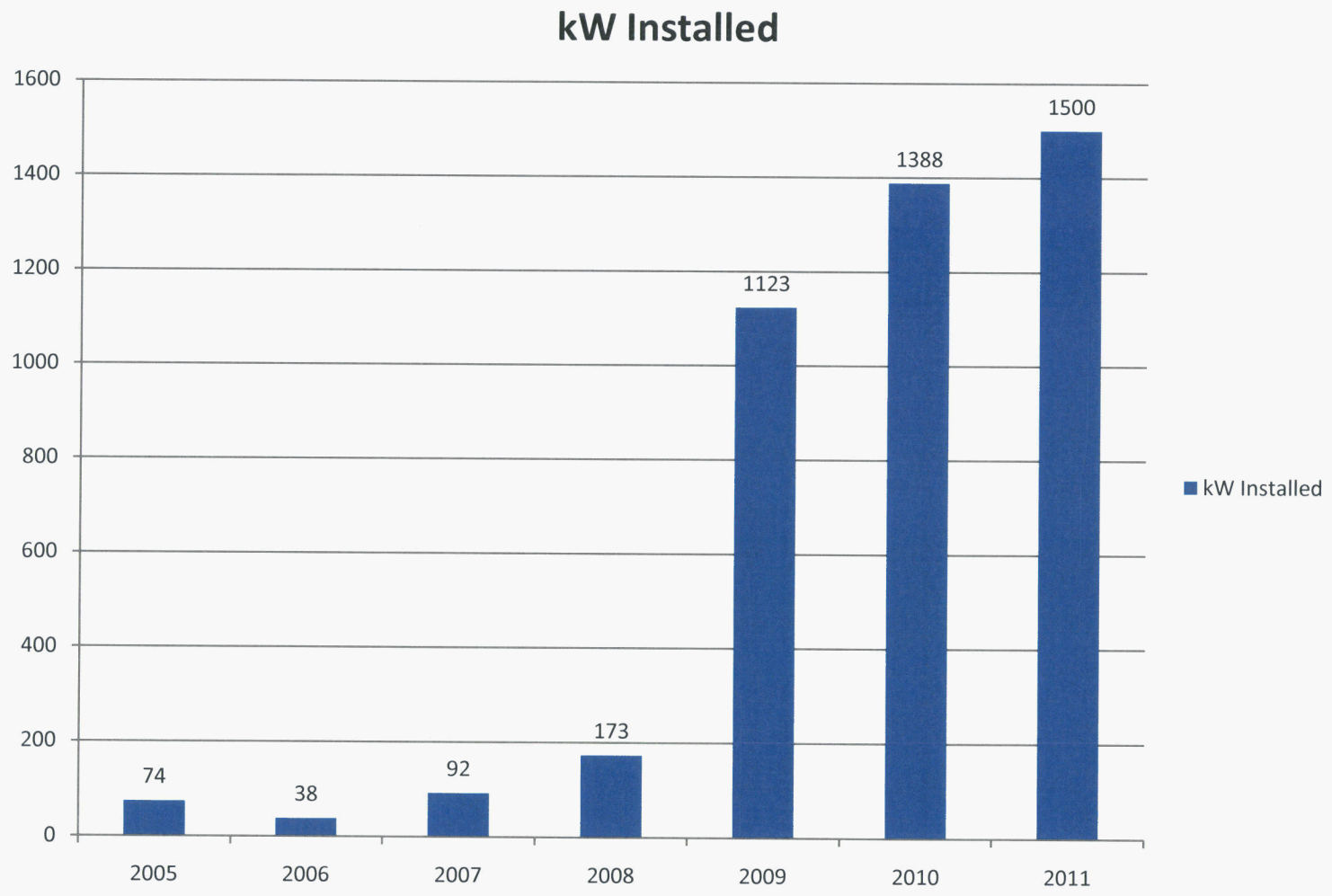
- Up front incentive
  - Separate technology buckets
    - PV and other/solar water heating
  - Starting @ $1.60 in Q1 PV
  - 60% trigger by 6/30/2012 to $1.50
  - Hot water incentives simplified - $0.50/kWh up to $1,750
  - Residential leases drop to $1.00

    Leasing entities do not require same subsidies as they utilize commercial tax incentives from Federal and State programs, depreciation (including bonus depreciation), and customer revenue streams. Allows ratepayers to reduce subsidies.

Residential Systems



Residential kW per Year



2011 Data is an estimate

Commercial Distributed Generation

- Up front incentive
  - Separate technology buckets
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  - 70 kW DC limit for PV
  - Starting @ $1.30 per watt in Q1 for PV – max 70 watt DC system
  - 60% trigger by 6/30/2012 and incentive drops to $1.05
  - Hot Water UFI increase in size limit to 400,000 kWh
- Performance Based incentive
  - Bidding timeframes by size (monthly, quarterly)
  - MW and/or dollar target range
  - 70 – 200kw = $0.125, 200kw – 400kw = $0.105, 401kw + = $0.91

Commercial Distributed Generation

UFI	# Installed	kW	# Reserved	kW Reserved
2007	4	28	0	0
2008	8	22	0	0
2009	17	207	0	0
2010	15	153	5	85
2011*	36	562	10	160
Total	**80**	**972**	**15**	**245**
PBI	**# Installed**	**kW**	**# Reserved**	**kW Reserved**
2009	0	0	1	1,750
2010	0	0	1	563
2011*	7	4,000	7	1,900
Total	**7**	**4,000**	**9**	**4,213**

*2011 Data is an estimate

Schools Program

- As approved by Commission in 2011 IP, UNS Electric is re-proposing Schools Program following successful implementation in TEP's service territory.
- System donations between 5kW – 10 kW
- Educational program developed and provided to schools
- Approximately half of area high schools will received system
- Schools eligible in Kingman, Lake Havasu City, and Nogales

Research and Development

- University Research – AzRISE
- Share information with TEP R&D efforts

Research and Development Initiatives	Budget
AzRISE Research	$ 100,000

Total Budget Comparisons

Total REST Budget & Tariff Collection 2012:	2012	2011
Purchased Renewable Energy:	$ 2,791,639	$ 1,100,000
Customer Sited Distributed Renewable Energy:	$ 5,559,647	$ 6,368,914
Technical Training:	$ 350,000	$ 77,250
Information Systems Integration Costs 10	$ 100,000	$ 50,000
Metering:	$ 76,060	$ 146,000
Program Labor and Administration	$ 291,529	$ 292,750
Renewable Energy Research and Development:	$ 65,000	$ 35,000
2012 Program Cost (Total Budget)	$ 9,233,874	$ 8,069,914
Undercollection of REST Funds fromprior year	$ 242,841	
Grand Total (to be collected in tariff)	$ 9,476,715	$ 8,069,914

Tariff

Rate Class	2011 Approved REST Budget	2012 Proposed REST Budget
Residential	$4,178,457	$4,670,642
Commercial	$2,858,280	$3,517,501
Industrial & Mining	$1,021,285	$1,289,076
Lighting (PSHL)	6,115	7,304
Total	**$8,058,022**	**$9,477,218**

Rate Class	Current Rates Caps	Proposed Rates Caps
Residential	$5.00	$6.00
Commercial	$160.00	$192.00
Industrial & Mining	$5,000.00	$6,000.00
Lighting (PSHL)	$140.00	$192.00
Per kWh to all Classes	**$0.008315**	**$0.010259**