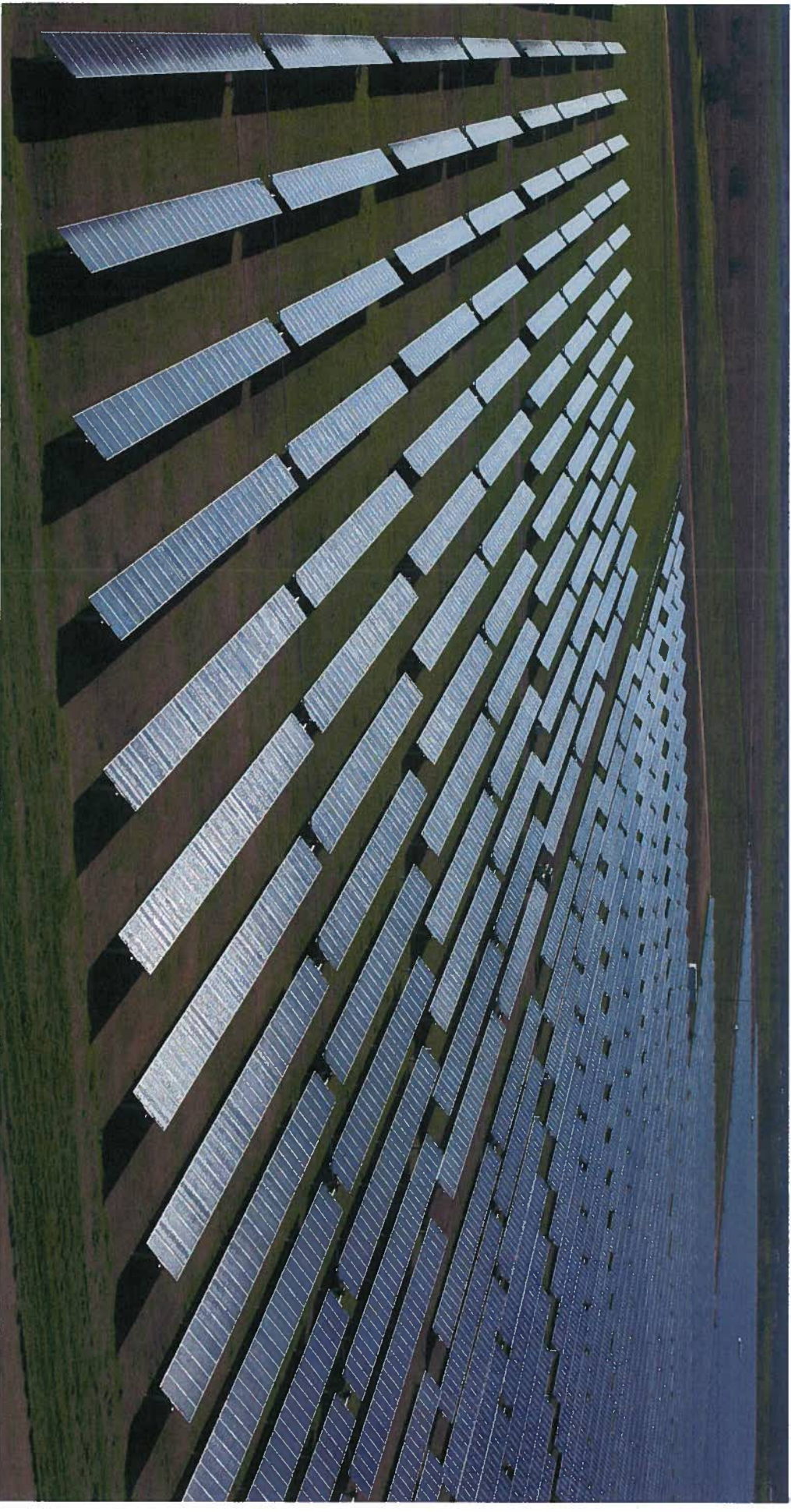




Austin Energy Solar Goal & Strategies

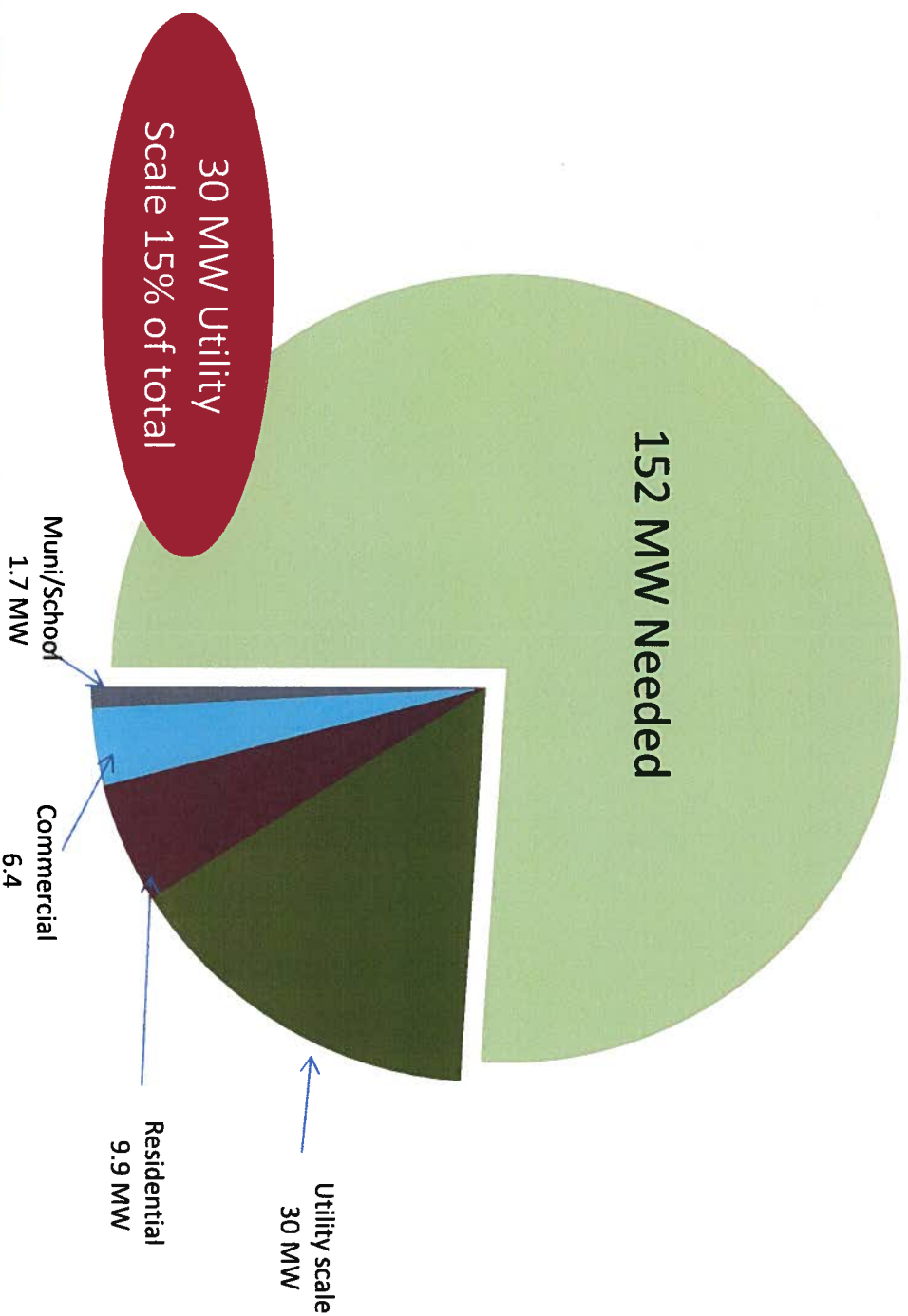


Emerging Technology and Telecommunications Committee (ETT)
August 21, 2013

Mission: Deliver clean, affordable, reliable energy and excellent customer service.



Solar PV Programs Committed and Installed Capacity



18 MW DG
9% of total





Consumer Solar Programs-Budget

Total FY14 Budget \$8.20 MM

- \$2.97 MM: Residential Rebate
- \$1.33 MM: Commercial PBI
- \$0.10 MM: Solar Water Heater Rebate
- \$3.80 MM: Community Solar

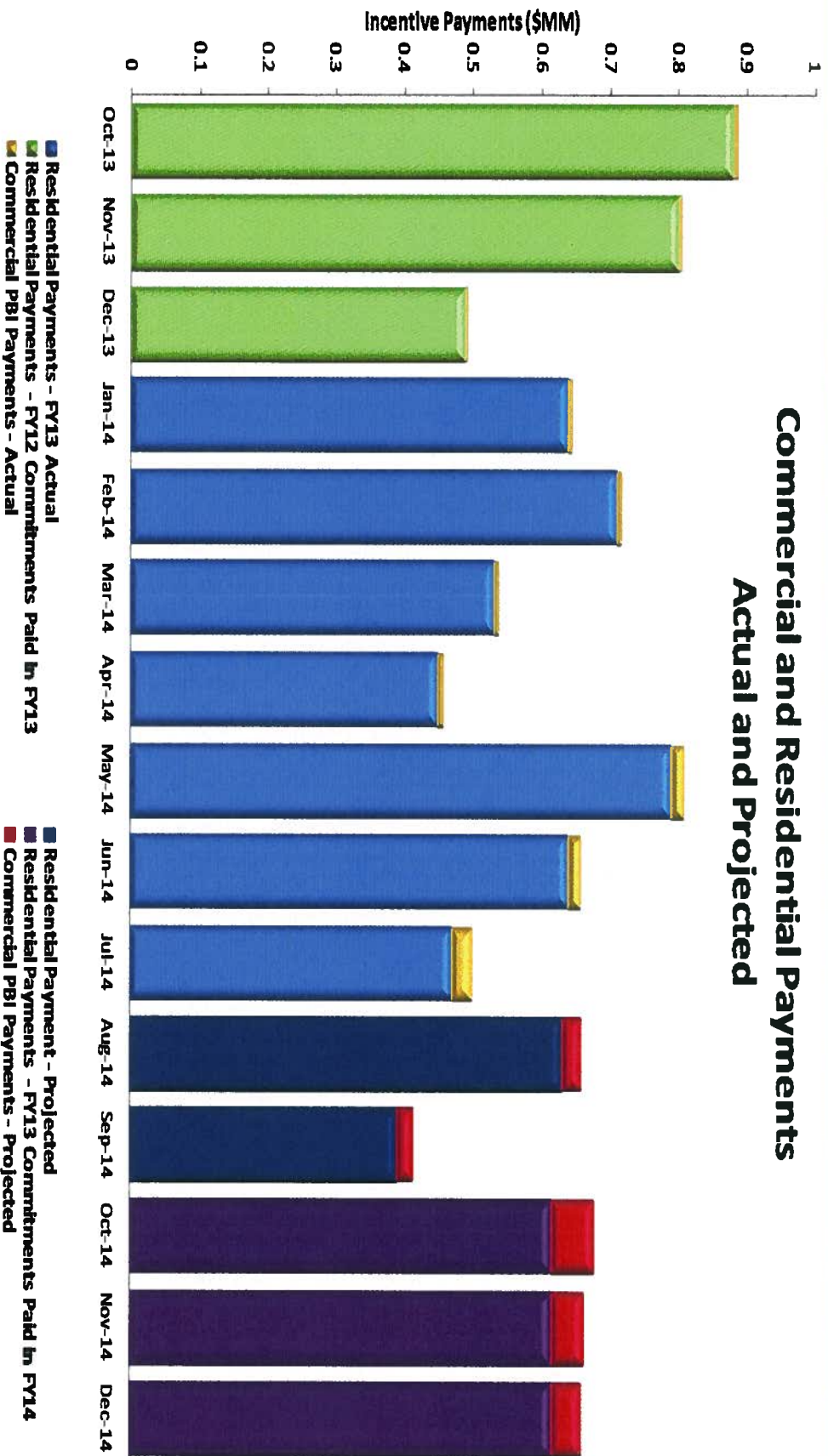
Consumer Solar Programs	2011 BUDGET (\$MM)	2011 ACTUAL (\$MM)	2012 BUDGET (\$MM)	2012 ACTUAL (\$MM)	2013 BUDGET (\$MM)	2013 YTD ACTUAL (\$MM)	2014 PROPOSED (\$MM)
PV Rebates	3.97	4.57	4.33	5.72	7.30	6.03	2.97
PV Comercial Performance Based Incentive	0.03	0.01	0.25	0.04	0.10	0.11	1.33
Solar Water Heater Rebate	0.40	0.09	0.05	0.19	0.10	0.04	0.10
Community Solar	0.00	0.00	0.00	0.00	0.00	0.00	3.80
Total	4.40	4.68	4.63	5.94	7.50	6.18	8.20





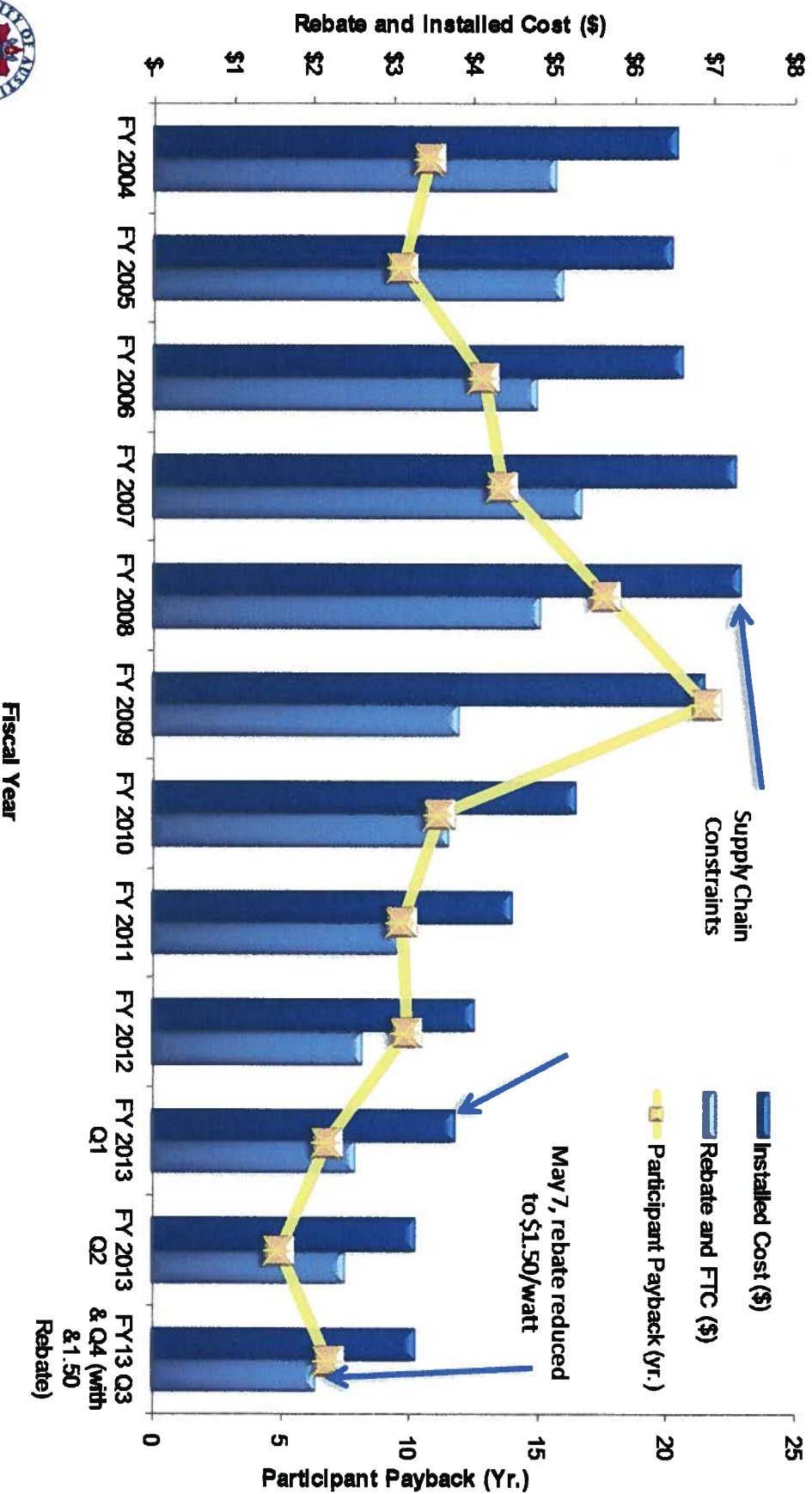
Consumer Solar Programs - Payments

Commercial and Residential Payments Actual and Projected





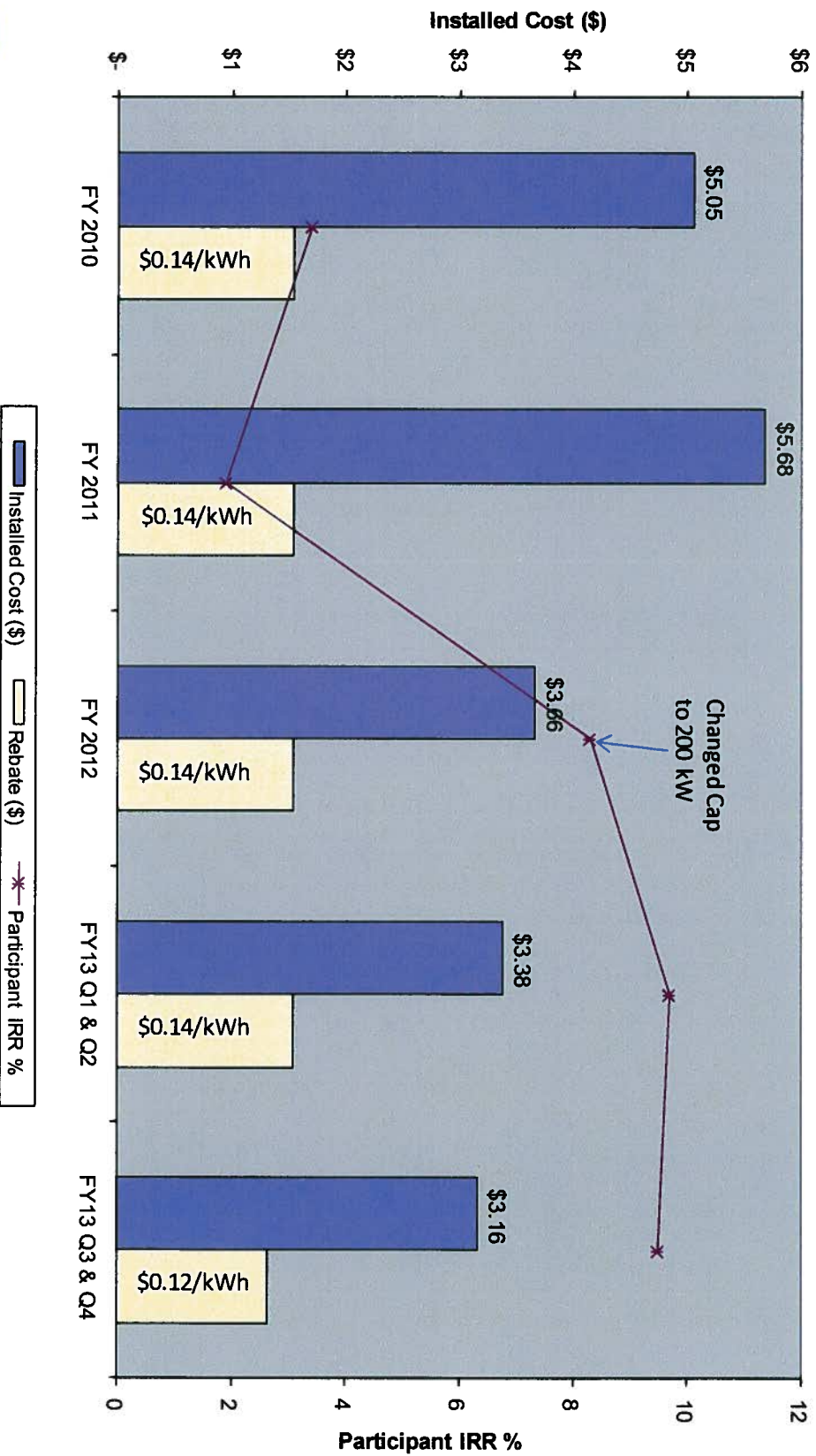
CONSUMER SOLAR PROGRAMS - RESIDENTIAL





Commercial Solar Programs - Commercial

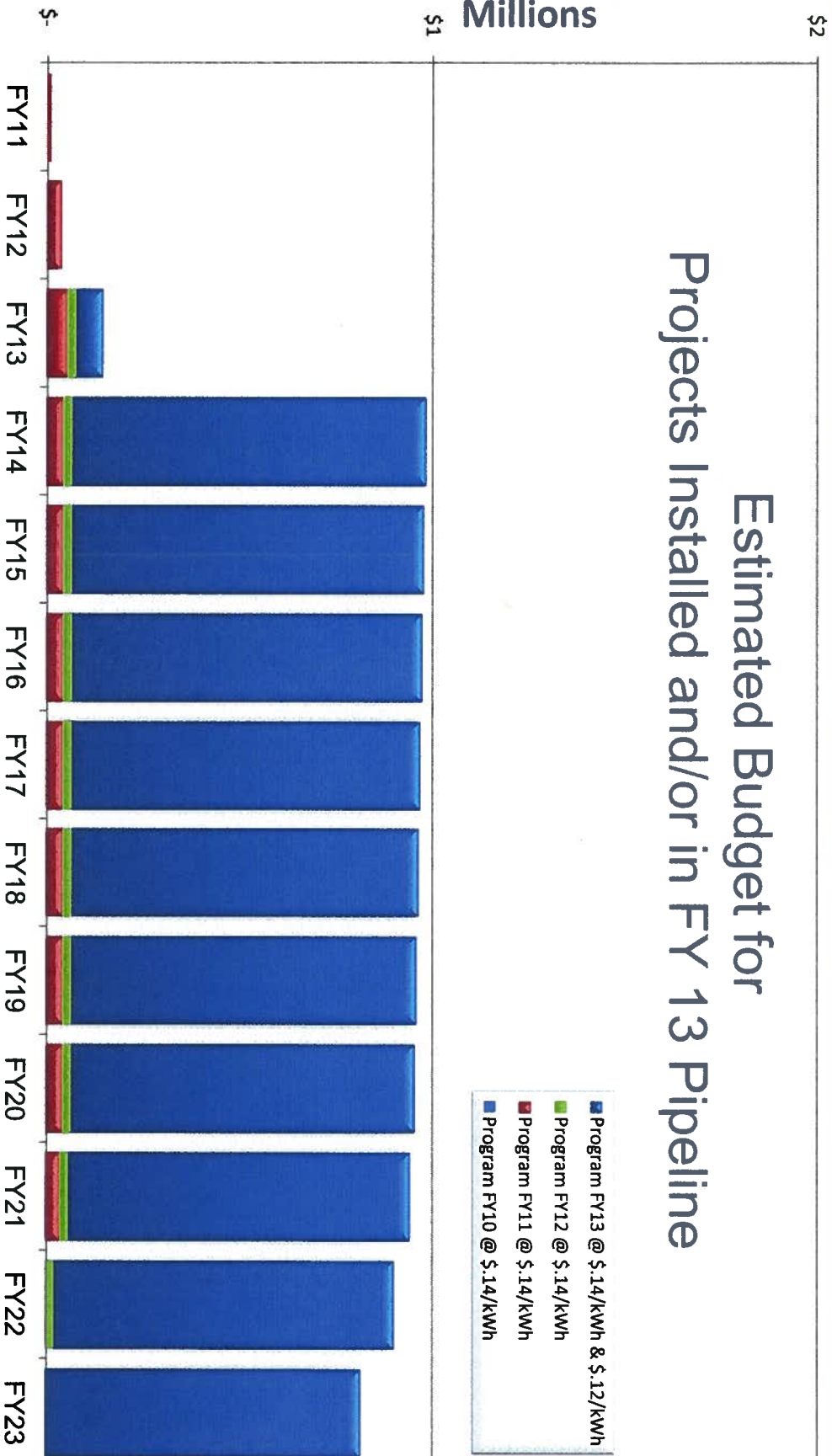
Performance Based Incentive (PBI) History





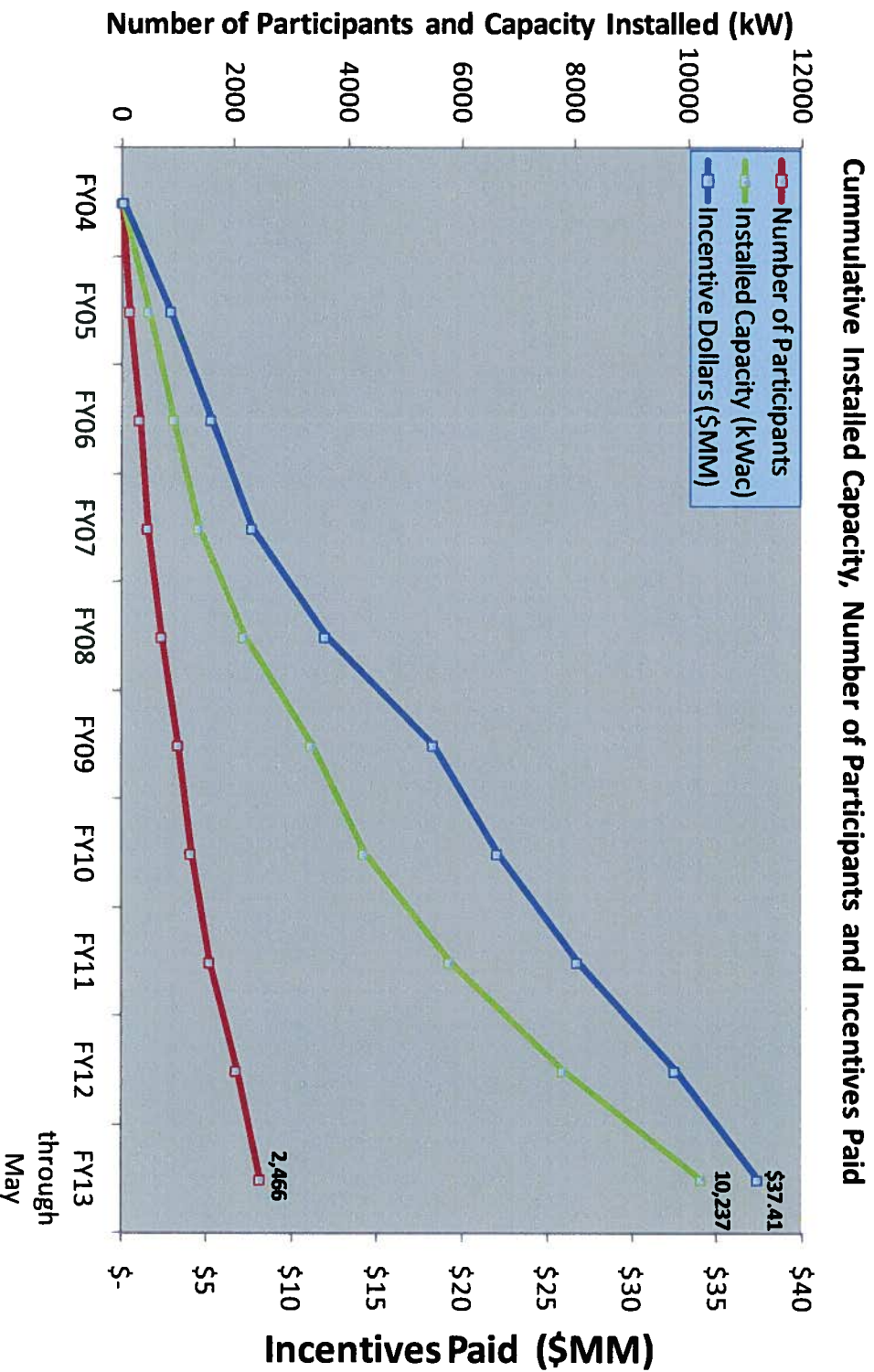
CONSUMER SOLAR PROGRAMS - COMMERCIAL

Estimated Budget for Projects Installed and/or in FY 13 Pipeline





Incentive Program Summary – Inception to Date (ITD)

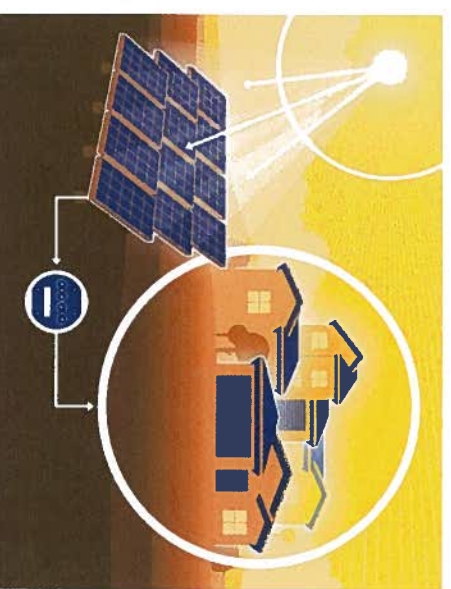




Community Solar

	Cost (\$/Wdc)	Total Cost (\$MM)	Capacity Factor (%)	MWH	# participants @ 6000 kwh/year
1 MWac					
Fixed	\$2.85	\$3.70	14.8	1700	281
Single Axis	\$3.00	\$3.90	19.4	2200	368
Rooftop	\$2.70	\$3.51	14.8	1700	281

5 potential sites
RFP By Year End
Operational Q1 2015





Local Solar Advisor Committee Review

- Market Considerations
- Scenarios
- Key Assumptions
- Analysis
- Next Steps





Market Considerations in Goal Analysis

➤ Pre-Nodal

- Austin Energy builds/buys to meet peak demand
- Austin Energy units dispatched to meet Austin Energy peak load and energy requirements

➤ After Nodal (December 2010)

- Austin Energy buys all power from the Market (regardless of source)
- Austin Energy Sells all Gen to the Market
- Austin Energy Gen no longer dispatched to Austin Energy Load
- No requirement to build or buy new resources
- New resource additions determined by economics and goals





Solar PV Scenarios Considered

2020 Scenario	MW						2020 Goal
	Local				Utility Scale		
	Residential	Commercial	Community	Total	Wholesale		
Existing 48 MW	9.9	8.1		18	30		
Current Goal (200 MW)	38	39	10	87	113	200	
Inc. to 400 MW (LSAC Recommendation)	50	50	100	200	200	400	
Inc. to 600 MW (LSAC Recommendation)	50	50	200	300	300	600	

LSAC = Local Solar Advisory Committee





Solar PV Scenarios - Assumptions

• Case A

- Residential - current value of solar (VOS) of 12.8 cents/kWh for the future years; rebates decline over time
- Commercial - includes both PBI (energy) and cost not recovered by base rates due to net metering. The PBI declines over time
- Community Solar - based on recent Indicative offer of \$110 / MWh and declines by 5% each year.
- Wholesale - based on indicative offers of \$69 / MWh and declines by 5% each year.
- Assumes Production Tax Credit does not expire over the period



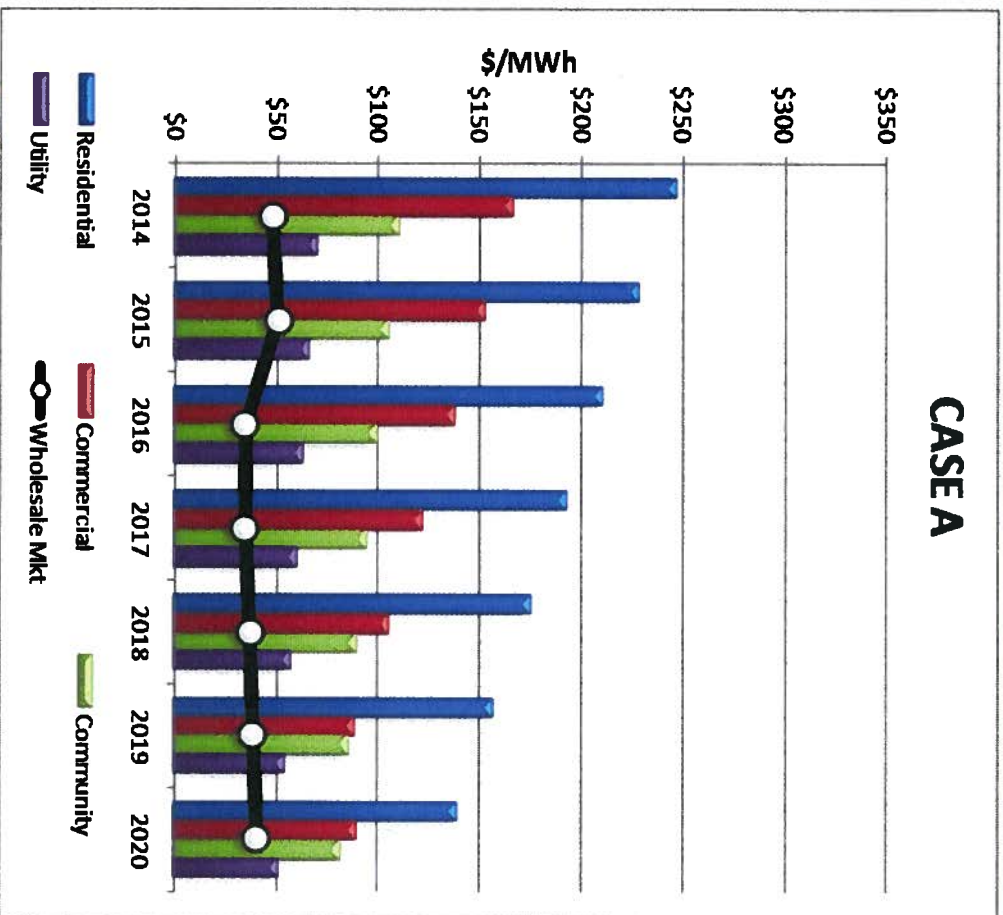
• Case B

- Residential - Same as Case A, but solar costs and rebates remain constant over time
- Commercial - Same as Case A, but solar costs and rebates remain constant over time
- Community Solar - based on wholesale offers adjusted for lower capacity factor and higher O & M costs.
- Wholesale - based on average of February 2013 renewable RFP offers for solar PV
- Assumes Production Tax Credit expires after 2016

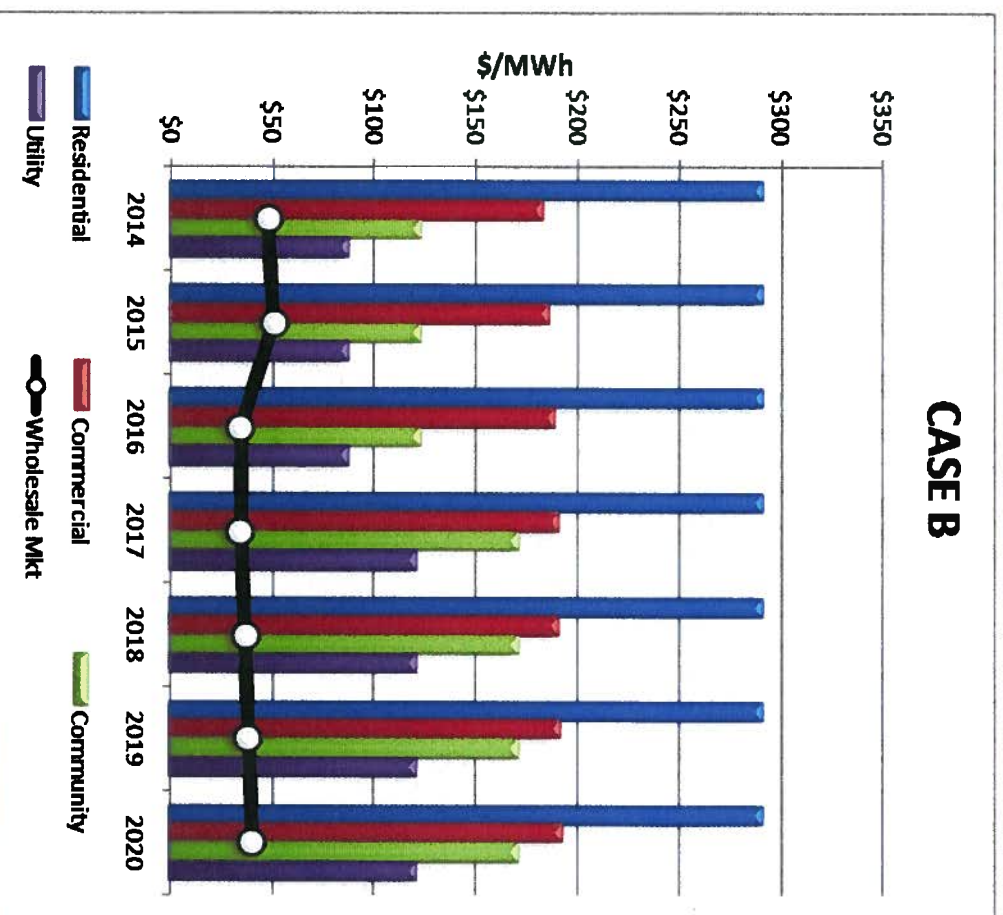


Average Cost (\$/MWh) Case A vs. Case B Assumptions

CASE A

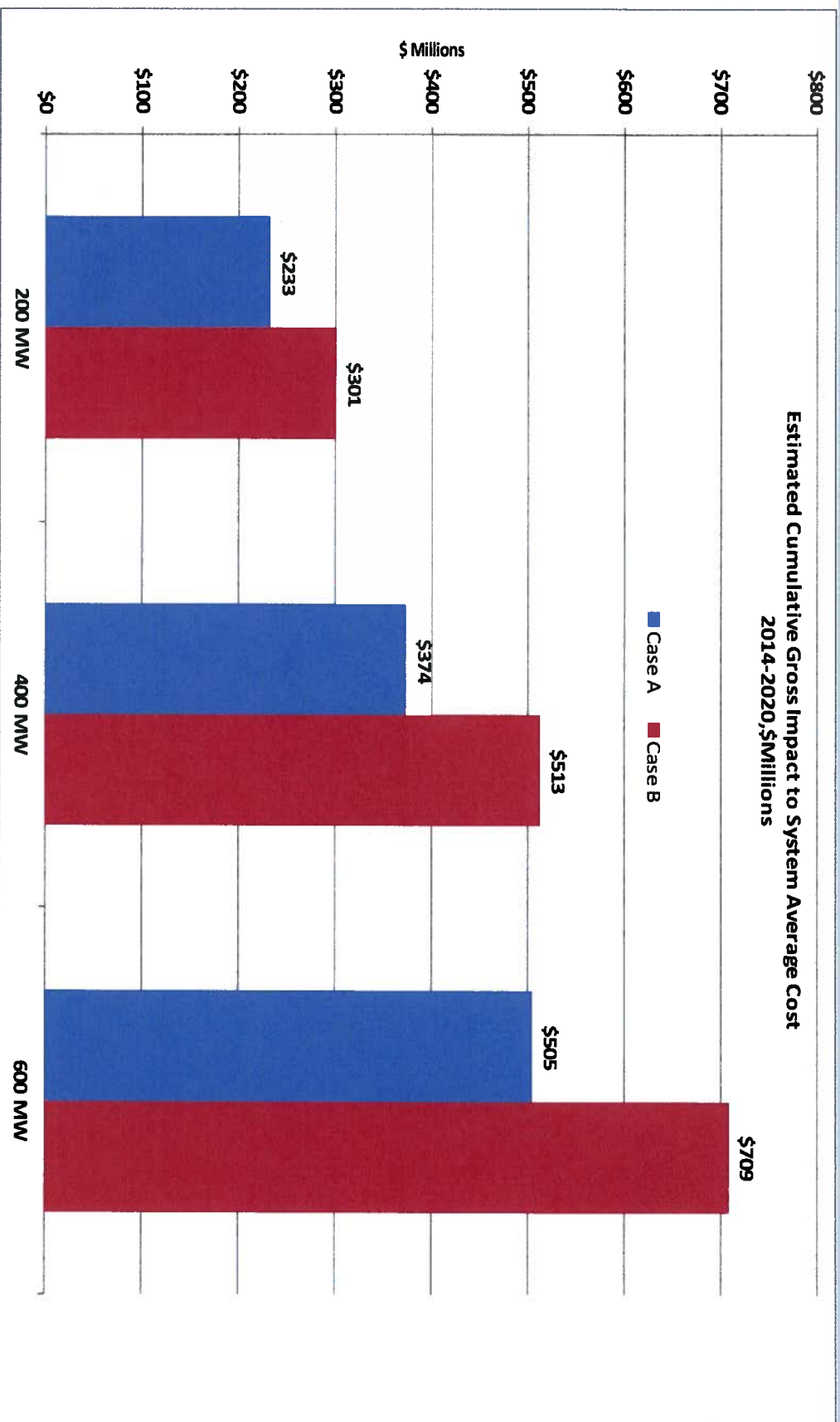


CASE B





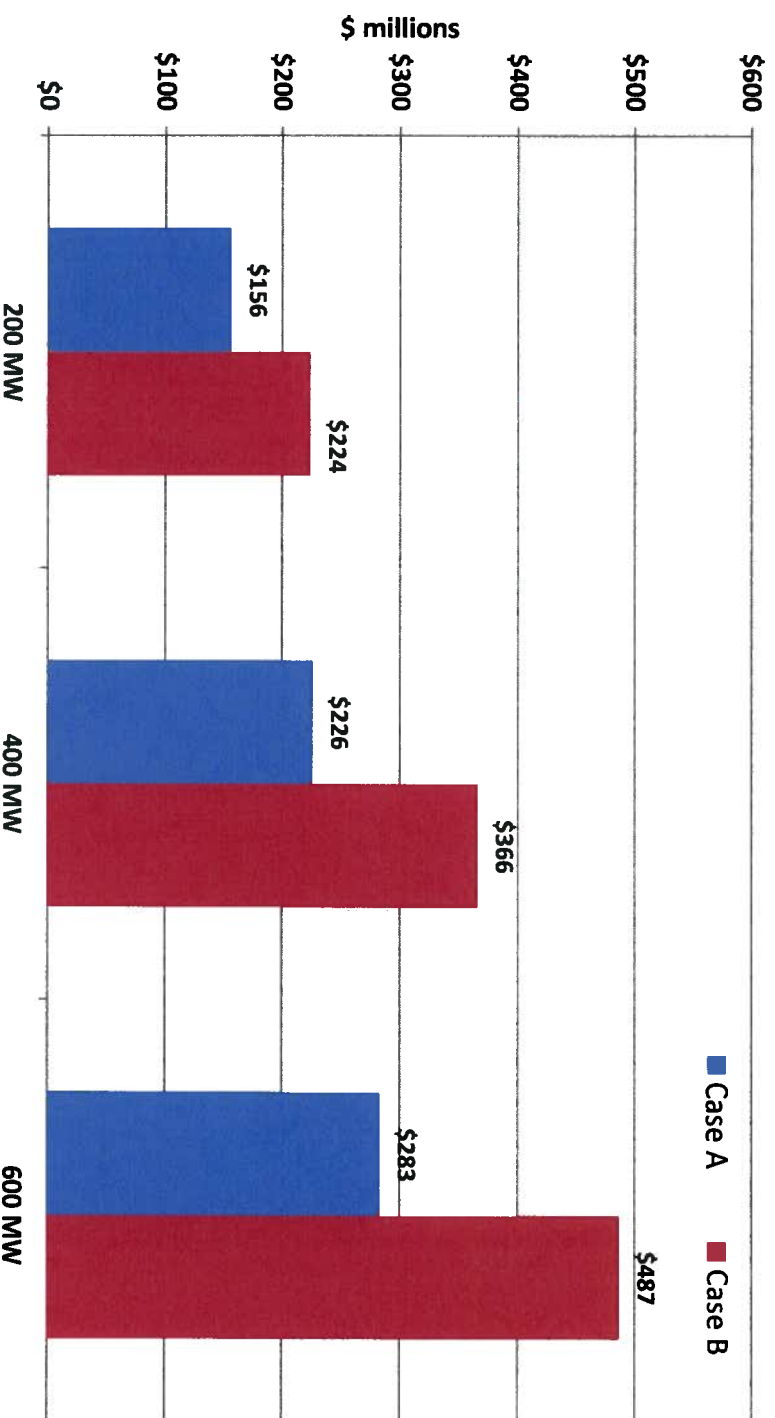
Estimated Cumulative Gross Impact





Estimated Cumulative Net Impact

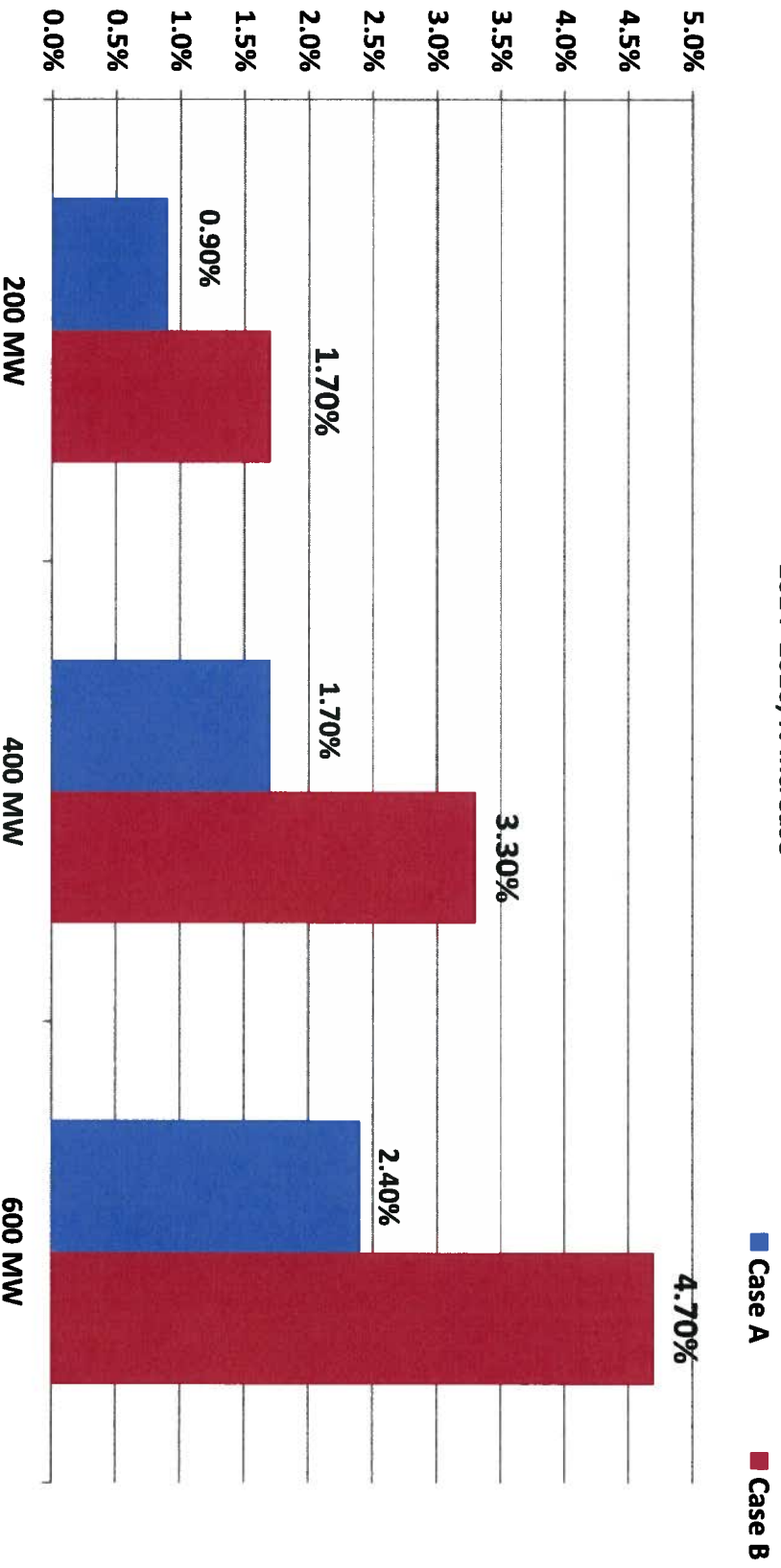
Estimated Cumulative Net Impact to System Average Cost
2014- 2020, \$ Millions





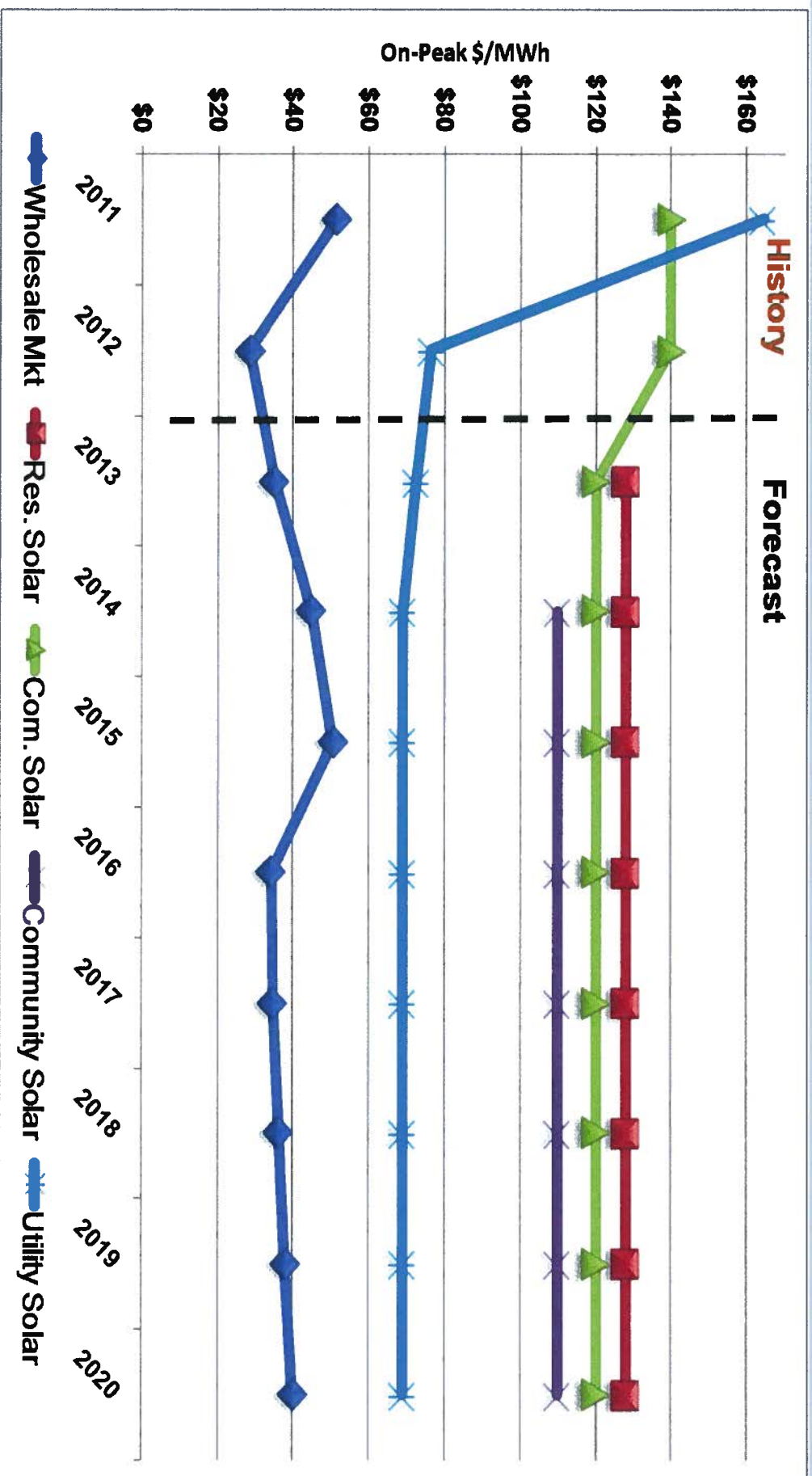
Estimated Net Annual Impact to System Average Rates

Estimated Net Annual Impact to System Average Rates
2014- 2020, % Increase





Current Costs vs. Market Prices

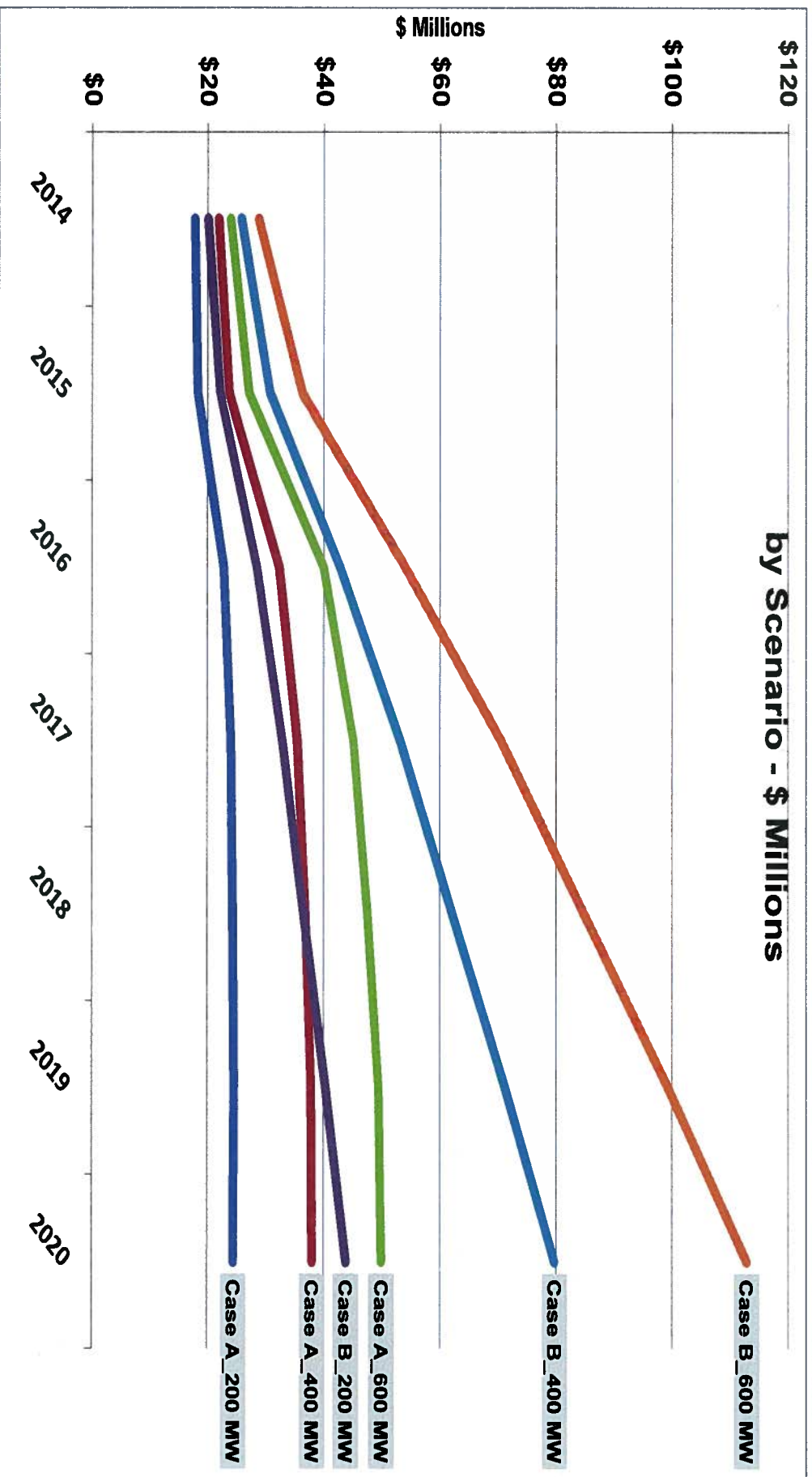


* Residential Value of Solar (VOS) Does Not Include Rebates

** Community and Wholesale Solar Indicative PPA Prices



Estimated Annual Net Cost





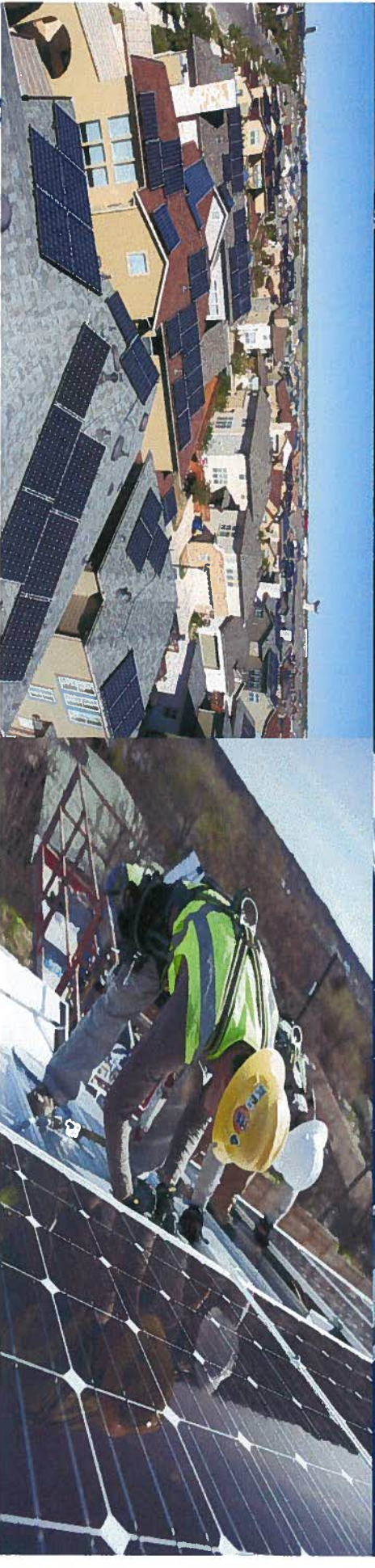
Next Steps

- **Value of Solar Study**
 - Preliminary Report due September 6th, 2013
- **Independent review of LSAC assumptions**
 - Preliminary Report due September 6th, 2013
- **Presentation to the RMC – September 2013**
- **Resource Planning Presentation to the Council Committee on Austin Energy (CCAE) – October 2013**
 - LSAC Recommendation Review
- **Development of a Community Solar Offering under way**
- **Solar RFP this Fall**





QUESTIONS?





Appendix





Current Resource Plan

Fall 2013 RFP

MEGAWATT CAPACITY

Year	Coal	Nuclear	Gas	Biomass	Wind Add - (Expire)	Solar ³	Renewable Portfolio
2013	602	436	1497	112	849.4	48.0	22.9%
2014							23.8%
2015					370	25.0	34.9%
2016					200 / (195.6)		35.2%
2017			200		(91.5)	25.0	33.4%
2018			800 ²		100 / (35)	25.0	34.8%
2019						30.0	35.0%
2020						47.0	35.4%
2021							35.0%
2022							34.6%
Capacity	367¹	436	2,497	112	1,197	200	Total 4,809

Notes:

- 1) Capacity equivalent to meet CO2 reduction goal
- 2) Potential natural gas combined cycle additions up to 1,000 MW by 2019, subject to change
- 3) Includes distributed solar
- 4) Additional note: Plan assumes achievement of DSM goals

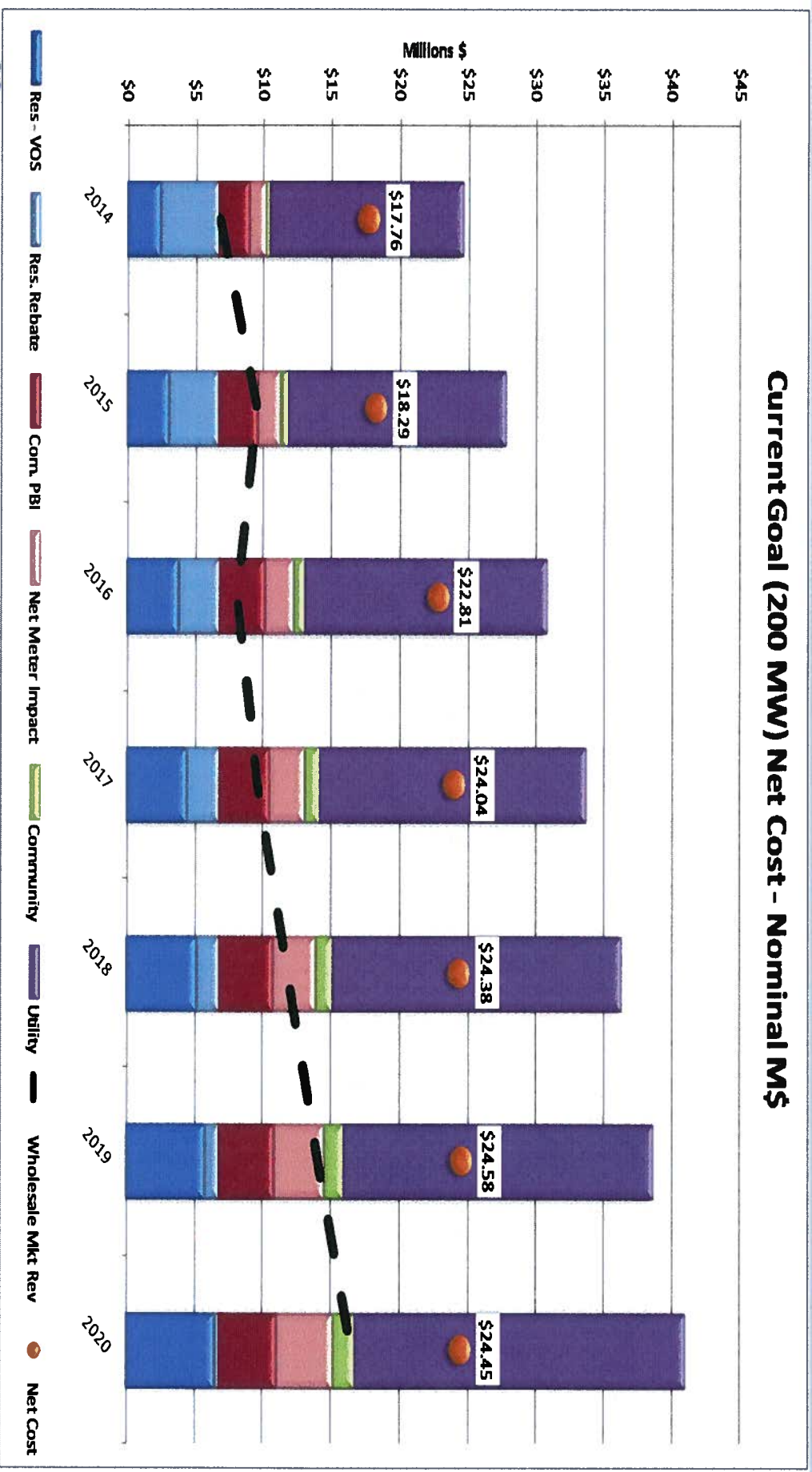




Annual Estimated Net Cost

Current Goal (200 MW) – Case A

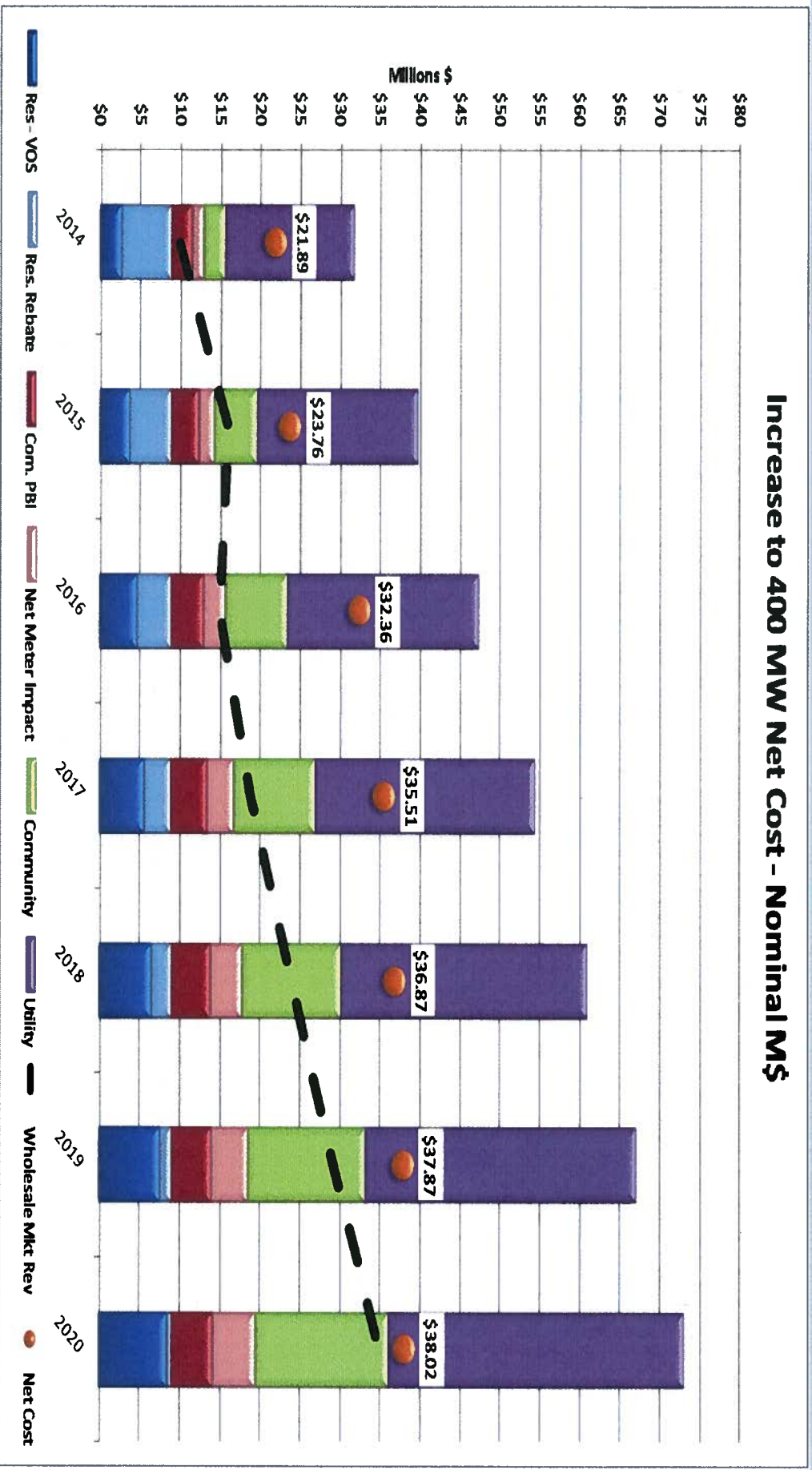
Current Goal (200 MW) Net Cost - Nominal M\$





Annual Estimated Net Cost Increase to 400 MW – Case A

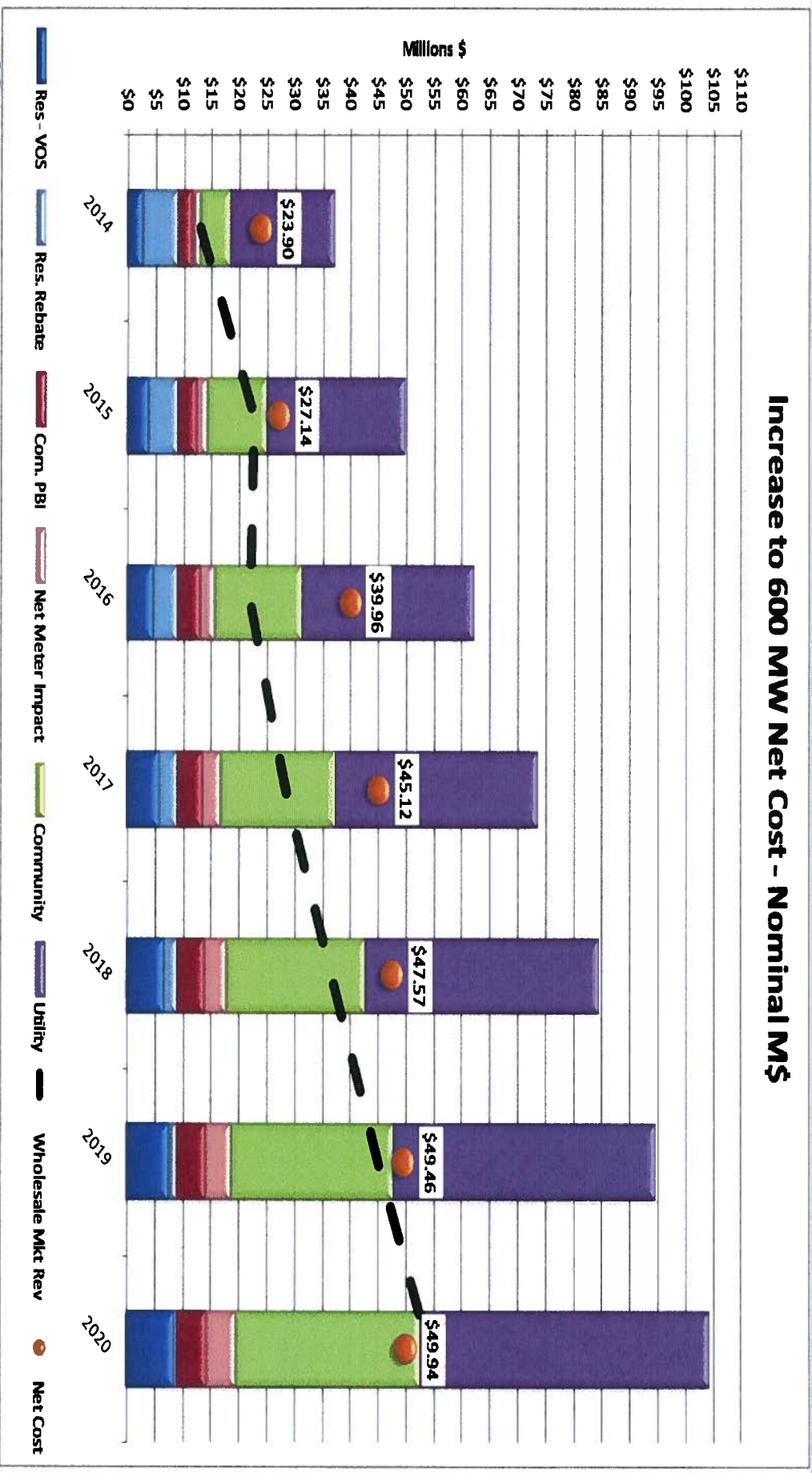
Increase to 400 MW Net Cost - Nominal M\$





Annual Estimated Net Cost Increase to 600 MW – Case A

Increase to 600 MW Net Cost - Nominal M\$

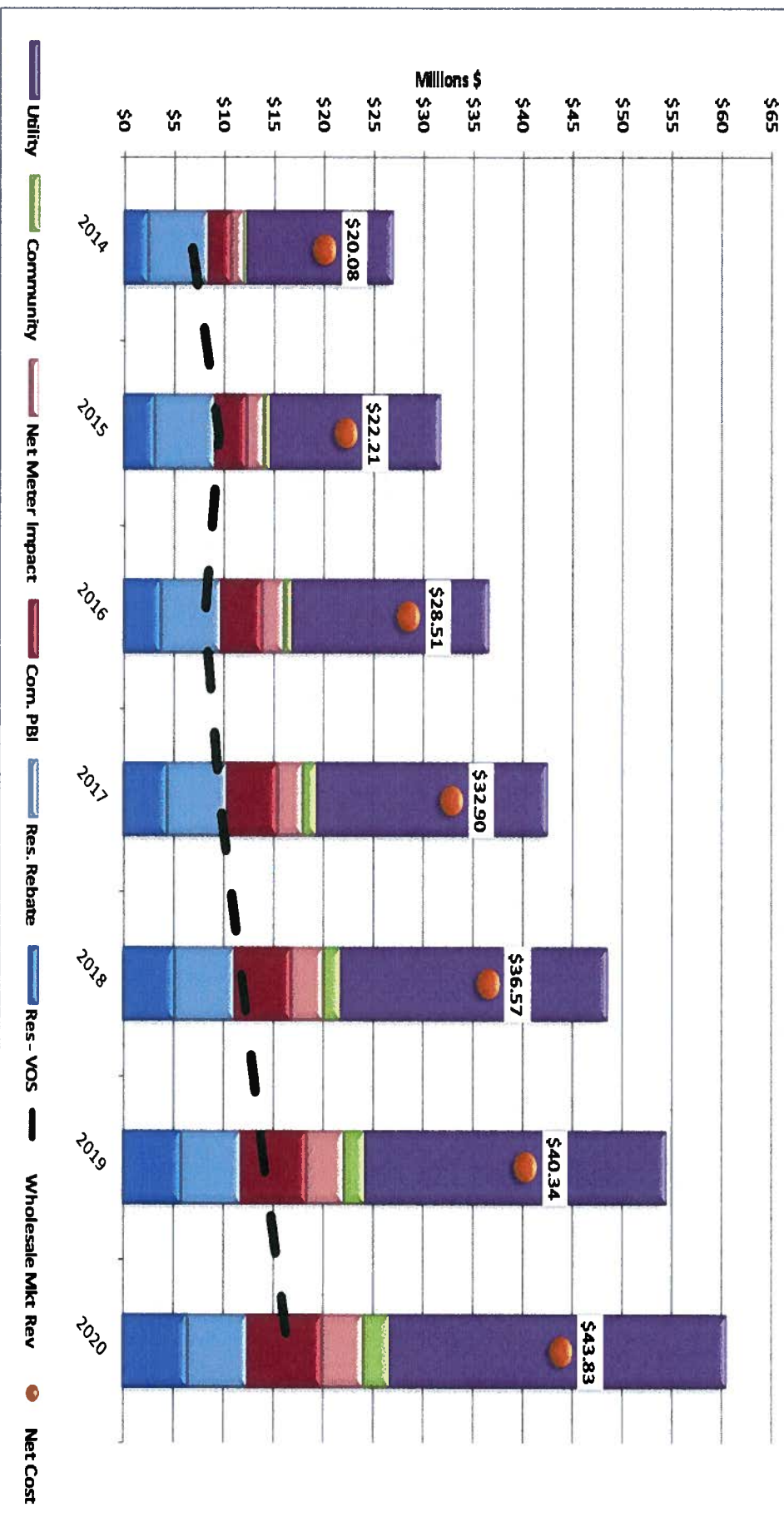




Annual Estimated Net Cost

Current Goal (200 MW) – Case B

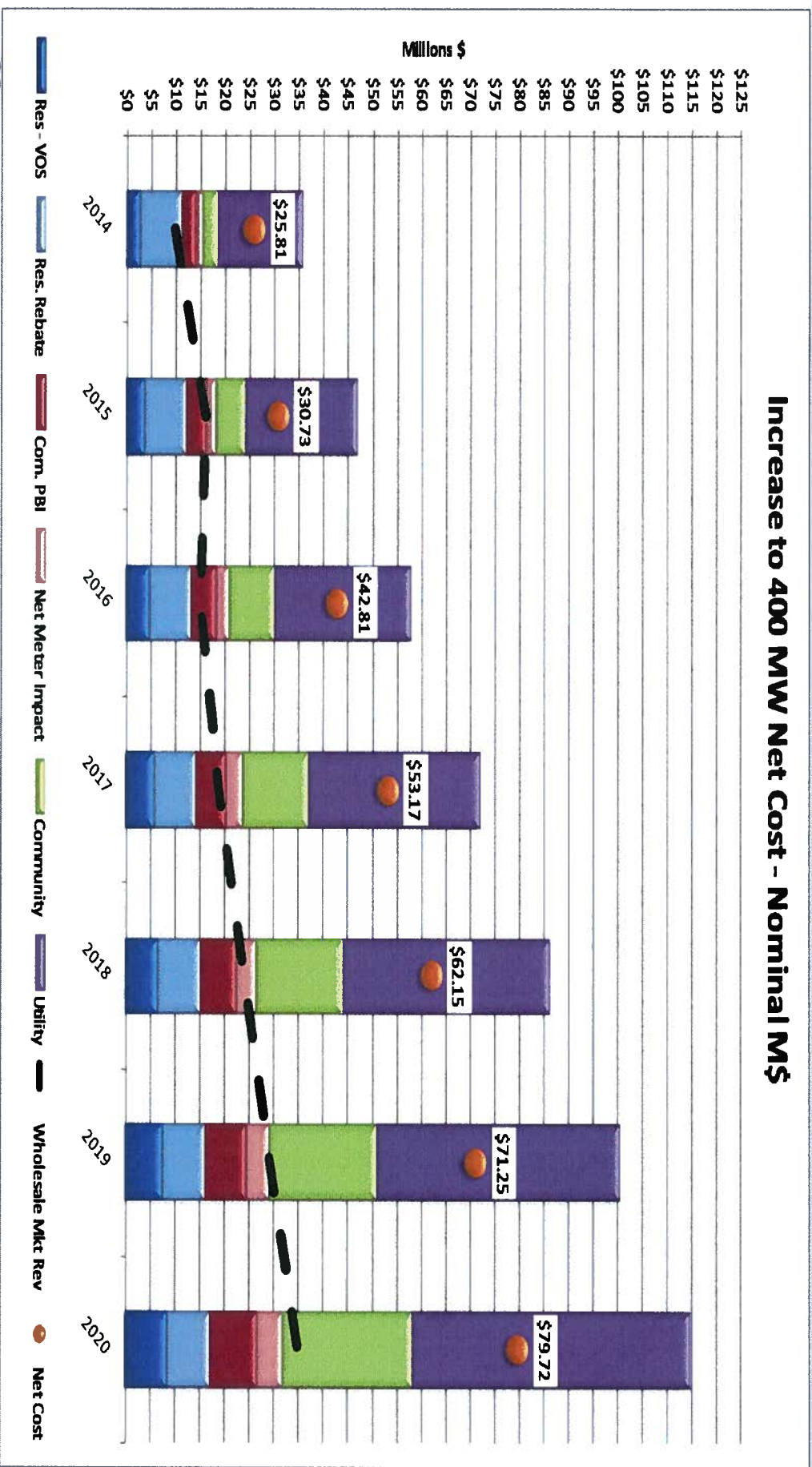
Current Goal (200 MW) Net Cost - Nominal M\$





Annual Estimated Net Cost Increase to 400 MW – Case B

Increase to 400 MW Net Cost - Nominal M\$





Annual Estimated Net Cost Increase to 600 MW – Case B

Increase to 600 MW Net Cost - Nominal M\$

