Valley Clean Energy Community Advisory Committee Meeting – Thursday, March 28, 2019

City of Woodland Council Chambers, Woodland, CA

Item 9 - Long Term Renewable Solicitation – Short List Background

- August 13, 2018 – Issued Long Term Renewables Solicitation
- September 17, 2018 – Bids Received

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Item 9 - Long Term Renewable Solicitation – Short List Background

Table 1. Pass/Fail Criteria

Criteria	Pass/Fail Threshold
Siting	Projects cannot be proposed for land with a prime agricultural designation. Projects cannot be proposed for areas that are designated as Renewable Energy Transmission Initiative ("RETI") Category 1 or 2. Category 1 lands are those identified where development is prohibited by law or policy. Category 2 lands are those where cultural or environmental conflicts would be highly likely and/or controversial.
Development Status	Projects have to at least have filed a permit application with the relevant land use authority and received an acknowledgment of the filing from such authority. Projects have to provide evidence of site control.
Out-Of-State Resources	Projects have to be located within California.
Interconnection Status	Projects must already be in an interconnection queue and have requested full capacity deliverability for the project interconnection.

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Item 9 - Long Term Renewable Solicitation – Short List Bid Summary

	Unique Projects Bid		Projects Meeting "Pass" Criteria	
Renewable Technology	**#**	**Capacity**	**#**	Capacity
Photovoltaic	18	941.4 MW	16	900.4 MW
Geothermal	1	9.0 MW	0	0.0 MW
Small hydroelectric (30 MW or less)	1	5.5 MW	1	5.5 MW
Wind	3	103.5 MW	0	0.0 MW
Total	**23**	**1059.4 MW**	**17**	**905.9 MW**

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Item 9 - Long Term Renewable Solicitation – Short List Screening/Ranking

- Screening/Ranking was done to pare the list of projects down to a manageable size for economic evaluation
- Factors in screening were
  - Permit progress
  - Status of Cultural/Environmental surveys
  - Whether or not sensitive cultural or habitat resources were identified
  - CEQA status
  - Whether wildlife permits were needed and obtained
  - Location of project (northern California preferred)
  - Whether the project was local, regional or other
  - Whether project could be online and delivering energy by April 1, 2021
- Highest Ranked 9 projects were advanced to short list evaluation

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Item 9 - Long Term Renewable Solicitation – Short List
Short List Evaluations

- Key factors in determining which projects to short list were:
  - At least one project selected could deliver any significant energy in 2020.
  - Whether total energy delivered from all selected projects will meet the legal requirement for significant energy under long term contract in 2021.
  - Price (value)
  - Selection of projects to supply at least the VCE minimum 42% renewable content in 2021 (and beyond).

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Item 9 - Long Term Renewable Solicitation – Short List
Short List Selection

- Projects selected for short listing
  - 72 MW solar project
  - 40 MW solar project.
- They both were selected for the following key reasons:
  - The two projects provided a renewable volume totaling at least 42% of VCE overall energy portfolio starting in 2021;
  - one of the two project will begin deliveries in 2020 in time to meet the deminimis long term contracting requirement in the 3rd RPS compliance period (2017 – 2020);
  - Both projects had favorable pricing.
  - No other combination of projects provided enough energy in 2021 to satisfy the RPS minimum long term contracting requirements which begin in 2021.
- One of the projects is connected to PG&E's system, and the other project is connected to SDG&E's system.
- The expected commercial operation date of one project is 10/1/2020, and the second is 1/1/2021.

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Item 9 - Long Term Renewable Solicitation – Short List Portfolio Impact

- Impact to VCE Renewable Portfolio

	PPA Capacity	2019	2020	2021	2022	2023	2024
Total Supply	112 MWs	0	37,915	326,203	326,203	326,203	327,108
VCEA Load		682,411	685,357	729,467	733,114	736,779	740,463
Incremental Contribution to Renewable Content		0%	6%	45%	44%	44%	44%
Implicit Combined Premium			$ (3.79)	$ (3.79)	$ (3.79)	$ (3.79)	$ (3.79)

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Item 9 - Long Term Renewable Solicitation – Short List
Next Steps

- Complete Short-Listing
  - Meet with Developers
  - Execute Letters of Intent
- Negotiate PPAs
- Obtain Board approval
- Follow up with staff recommendation to pursue local renewable developments

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Item 10 - 2019 IEPR Filing Long Term Load Forecast Background

- CEC's 2019 biannual Integrated Energy Policy Report LDE Filings Due April 19, 2019
  - LSEs must report recent historical actuals
    - Loads
    - Resources supplying energy
  - LSEs must report future resources under contract/ownership
    - Load forecast
    - Known resources
- Load Forecast will be the basis of the 2020 IRP
  - Still have the ability to provide alternative forecasts in the IRP process.

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Item 10 - 2019 IEPR Filing Long Term Load Forecast Customer Counts

- Began with current (January) customer counts:

	VCEA			PGE			
Customer/ Rate Class	Non-NEM	NEM Conversions	Total VCEA	Non-NEM, Opt Outs	NEM Not Enrolled	Total PG&E	Total VCE Service Area
Res	44,256	125	44,381	3,610	3,763	7,373	51,754
Res TOU	1,191	1,021	2,212	108	2,780	2,888	5,100
Small Comm	4,282	20	4,302	353	134	487	4,789
Small Comm TOU	180	6	186	94	115	209	395
Medium Comm	411	4	415	52	13	65	480
E19P	5		5		1	1	6
E19S	216	1	217	20	6	26	243
E20P	3		3	1	1	2	5
E20S	1		1		1	1	2
Ag	1,733	29	1,762	249	193	442	2,204
Street Lighting	459		459	50		50	509
Traffic Cont	156		156				156
Grand Total	**52,893**	**1,206**	**54,099**	**4,537**	**7,007**	**11,544**	**65,643**

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Item 10 - 2019 IEPR Filing Long Term Load Forecast Economic Outlook

- Find an economic outlook

Year	Employment (NAICS), Total Nonfarm (Thous.)	Personal Income (Millions)	Gross County Product (Millions)	Real Gross County Product (Millions 2009$)	Population (Thous.)	Total Retail Sales (Millions)	Real Total Retail Sales (Millions 2009$)
2010	89	8,013	10,067	9,940	201	1,699	1,627
2011	89	8,701	10,458	10,177	202	1,880	1,755
2012	90	9,007	10,692	10,188	205	1,954	1,797
2013	92	9,345	11,163	10,424	207	2,022	1,835
2014	93	9,985	11,669	10,661	209	2,101	1,894
2015	97	10,579	12,439	11,093	213	2,166	1,951
2016	100	11,000	12,943	11,344	216	2,224	1,979
2017	102	11,335	13,442	11,567	219	2,320	2,025
2018	104	11,746	14,191	11,932	222	2,428	2,075
2019	106	12,275	15,145	12,419	226	2,558	2,138
2020	108	12,922	16,039	12,826	229	2,657	2,172
2021	110	13,519	16,868	13,140	232	2,752	2,199
2022	111	14,108	17,723	13,458	236	2,842	2,221
2023	113	14,701	18,581	13,766	239	2,933	2,242
2024	114	15,350	19,531	14,138	242	3,027	2,266
2025	116	16,027	20,560	14,554	245	3,122	2,291
2026	117	16,725	21,587	14,936	249	3,215	2,314
2027	119	17,457	22,682	15,330	252	3,314	2,340
2028	120	18,272	23,898	15,769	255	3,421	2,368
2029	122	19,104	25,139	16,192	258	3,537	2,401
2030	124	19,989	26,358	16,568	262	3,651	2,429

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Item 10 - 2019 IEPR Filing Long Term Load Forecast
Customer Growth Forecasts

- Residential, small commercial, street lighting, and traffic control load growth tied to population growth forecasts
- Medium and large commercial growth tied to retail sales forecasts
- Very Large Commercial – no growth assumed
- Ag – No growth assumed

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Item 10 - 2019 IEPR Filing Long Term Load Forecast
Customer Growth Forecasts

- Annual Growth Rates

Year	Residential, Small Commercial	Medium and Large Comm
2020	1.47%	1.55%
2021	1.44%	1.27%
2022	1.40%	0.99%
2023	1.37%	0.96%
2024	1.37%	1.05%
2025	1.36%	1.11%
2026	1.32%	1.00%
2027	1.28%	1.10%
2028	1.31%	1.23%
2029	1.28%	1.37%
2030	1.24%	1.18%

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Item 10 - 2019 IEPR Filing Long Term Load Forecast
Customer Specific Load Shapes

- Customer rate-class-specific load shapes are developed from historical, weather-normalized hourly load data.
- Generally, for each rate class, load forecasts are developed by multiplying the number of customers (and growth in number of customers) by the rate-class-specific load shapes.
- Have introduced 2 load shape modifiers:
  - Net metered PV installations
  - Plug-In electric Vehicle adoptions

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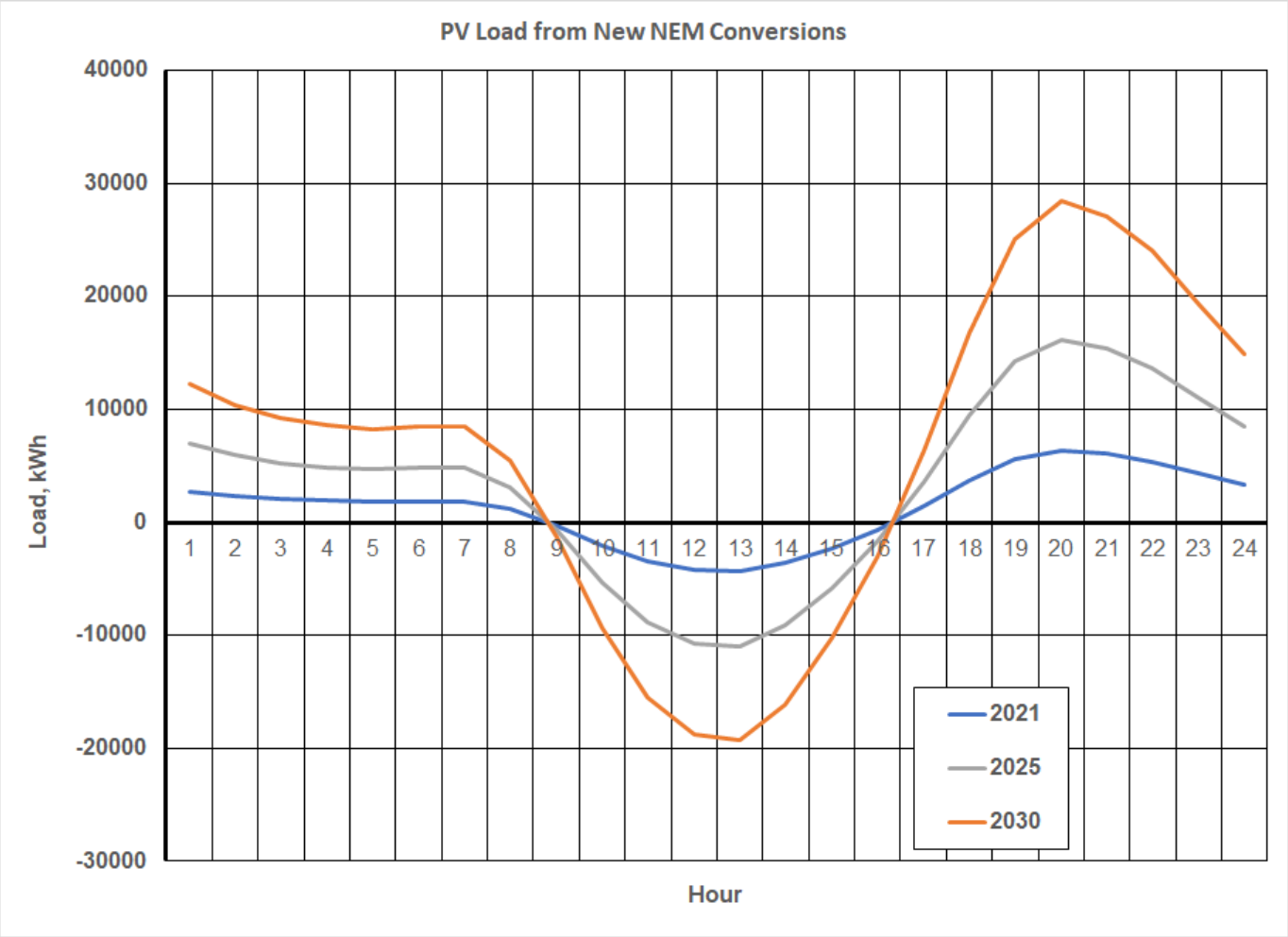
Item 10 - 2019 IEPR Filing Long Term Load Forecast
Net Metered PV Adoption

- 1000 installations/year for the forecast period.



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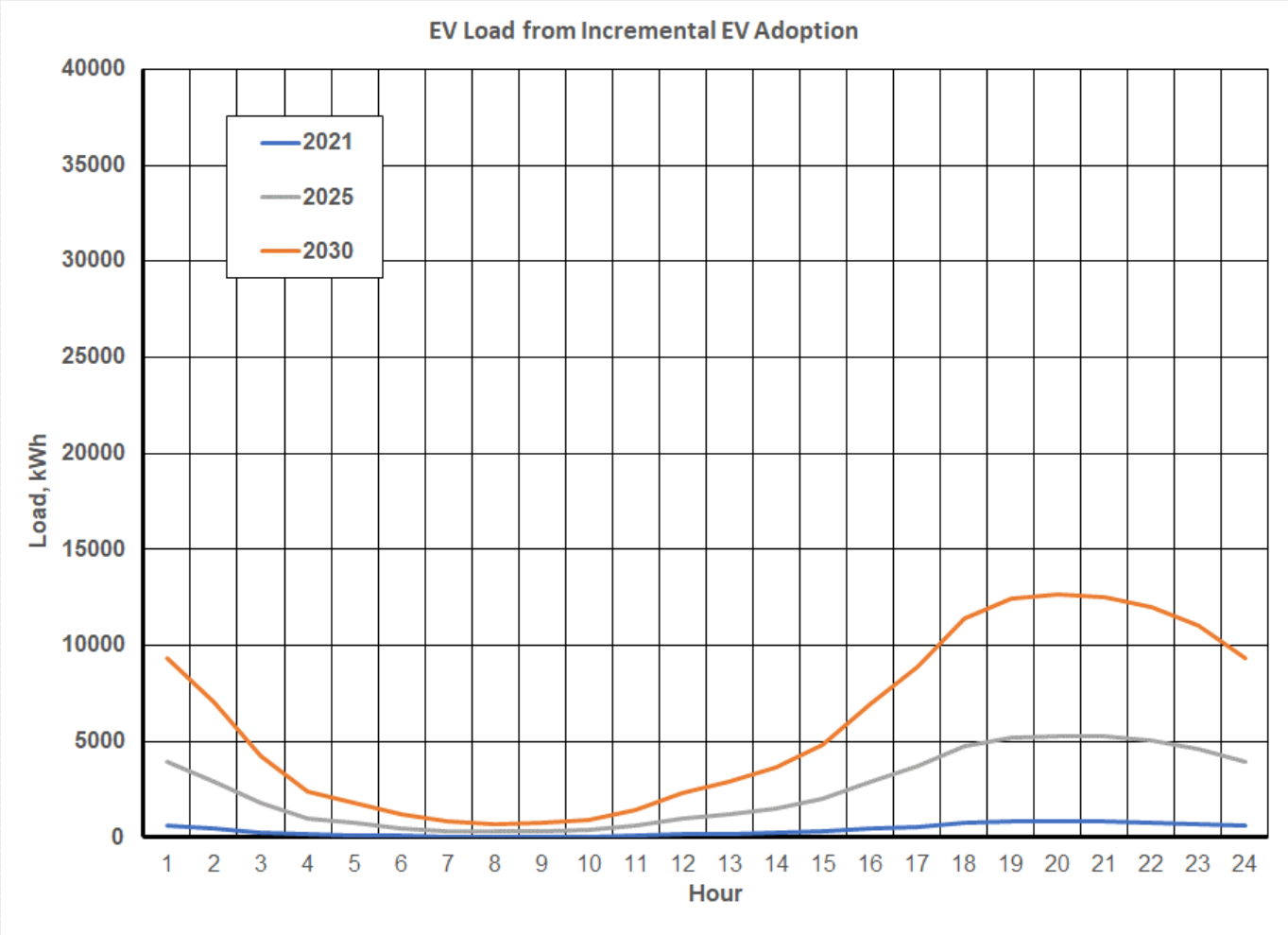
Item 10 - 2019 IEPR Filing Long Term Load Forecast
Electric Vehicle Adoption

- 18,566 additional EVs in VCE's customer base by 2030



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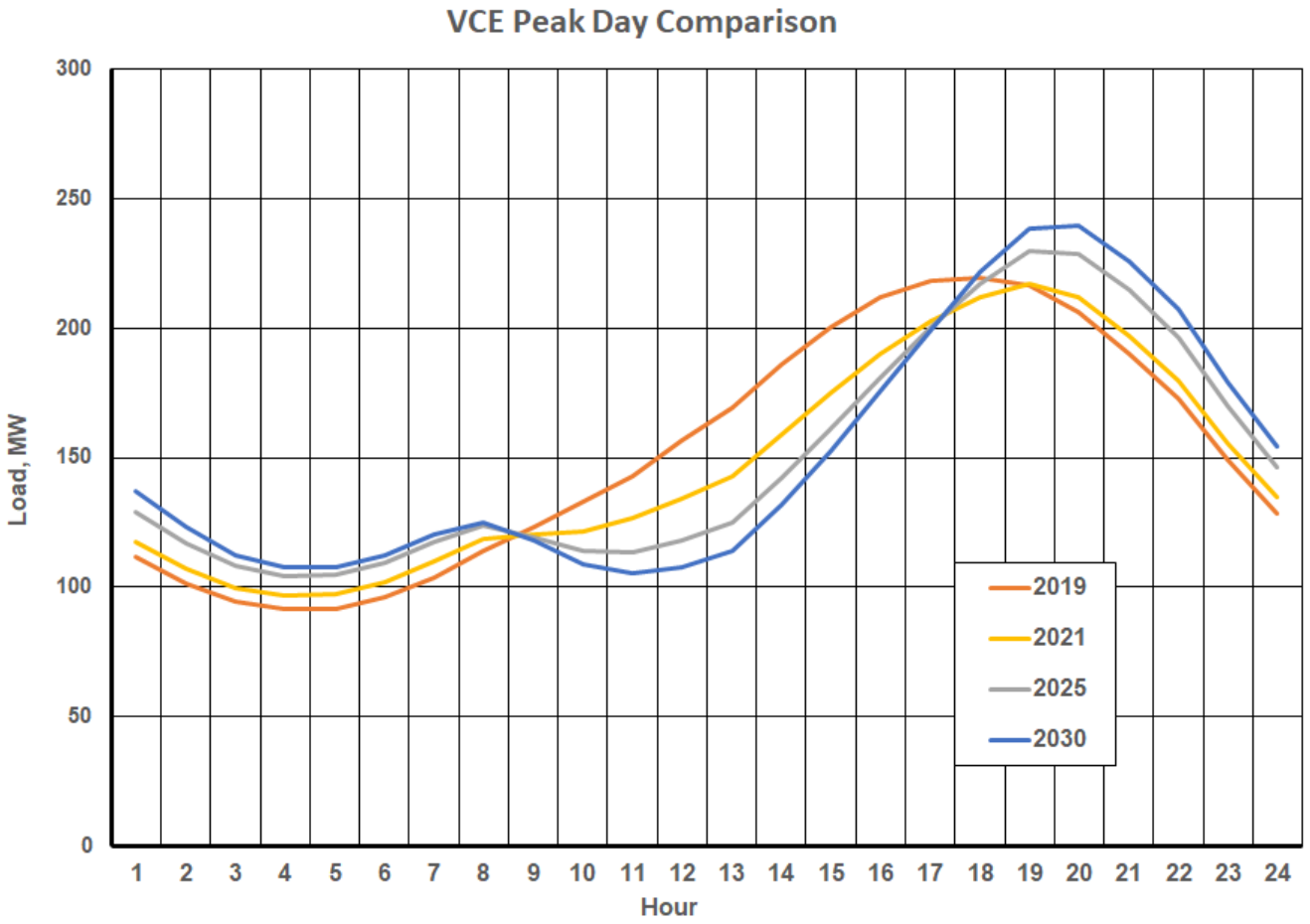
Item 10 - 2019 IEPR Filing Long Term Load Forecast
Peak Day Load Shape Transformation



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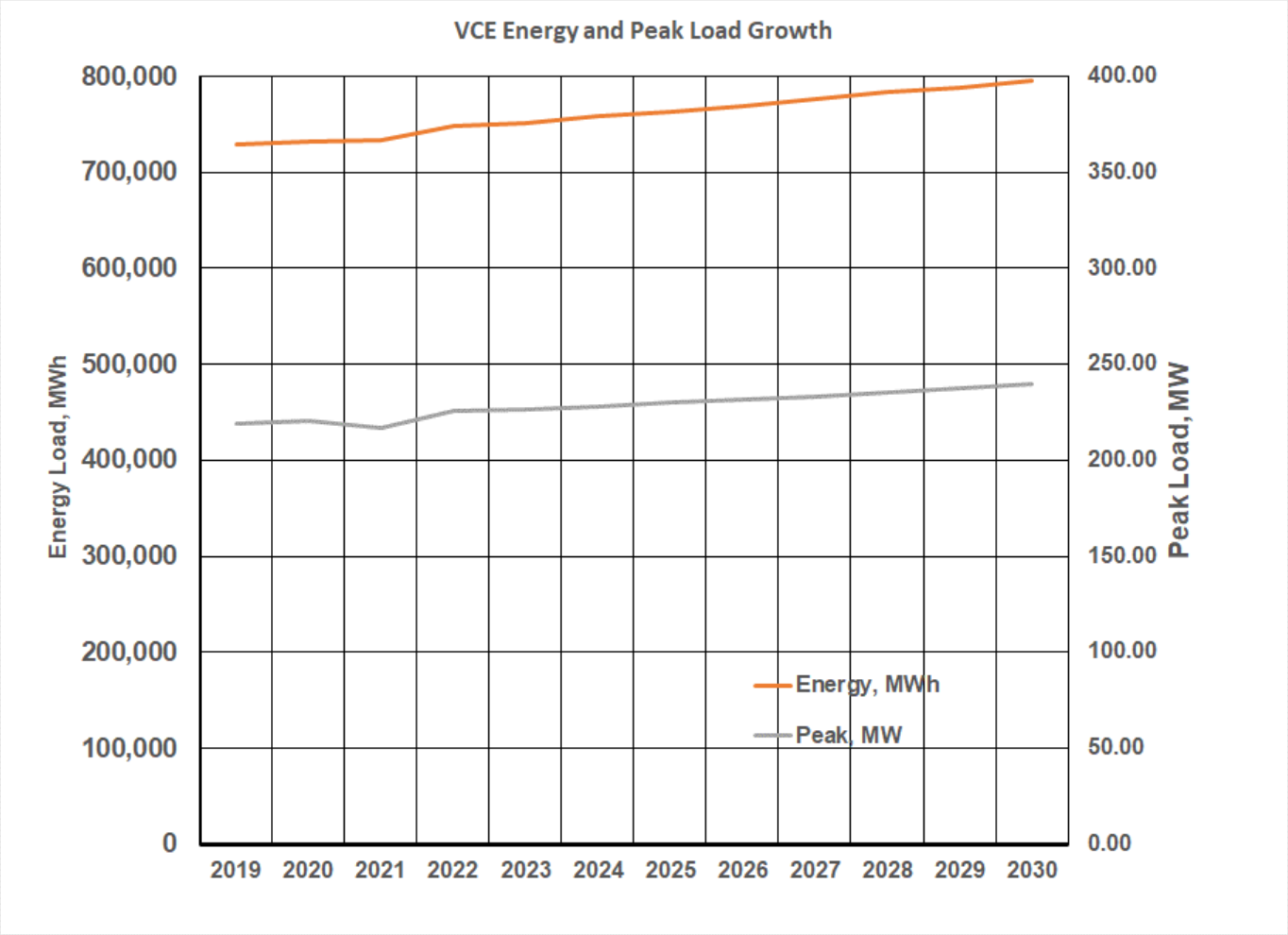
Item 10 - 2019 IEPR Filing Long Term Load Forecast Annual Peak/Energy Loads



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Item 10 - 2019 IEPR Filing Long Term Load Forecast
Future Considerations

- Some items for future consideration
  - New construction solar adoption
  - Increasing energy efficiency impacts to load
  - Electrification of space heat
  - Long term weather impacts

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Item 11 – Residential Time of Use - Agenda

- Residential Time of Use (RTOU) Background and Overview
- Implementation Schedule
- Community Choice Aggregation (CCA) Pilot Results
- Next Steps

Item 11 - Residential Time Of Use Rates are Coming

- The investor owned utilities are required by the CPUC to develop and implement residential time of use rates (RTOU)
- PG&E is working with the CCAs to implement the rates over a 13-month schedule beginning October 2020
- **CCAs can choose whether or not to participate**
- PG&E and CCA members participate on regular calls to work out details—most CCAs are in general agreement to implement the rate
- Two CCAs participated with PG&E in RTOU pilots starting April 2018—MCE and Sonoma Clean Power

Item 11 – State Policy and TOU Transition

California Public Utilities Commission (Decision 15-07-001 July 3, 2015) identified Residential Rate Reform objectives to:

- Make rates more understandable to customers
- Make rates more cost-based
- Encourage customers to shift usage to times of day that support a cleaner more reliable grid.

The CPUC ordered the investor owned utilities to provide the following consumer protections:

- Optional, not mandatory
- Mild differential between on- and off-peak rates
- Bill Protection

Source: CPUC RRR TOU Decision 15-07-001 (p. 2)

Item 11 - The Proposed Rate

7-day rate including weekends and holiday

Item 11 - Additional Details

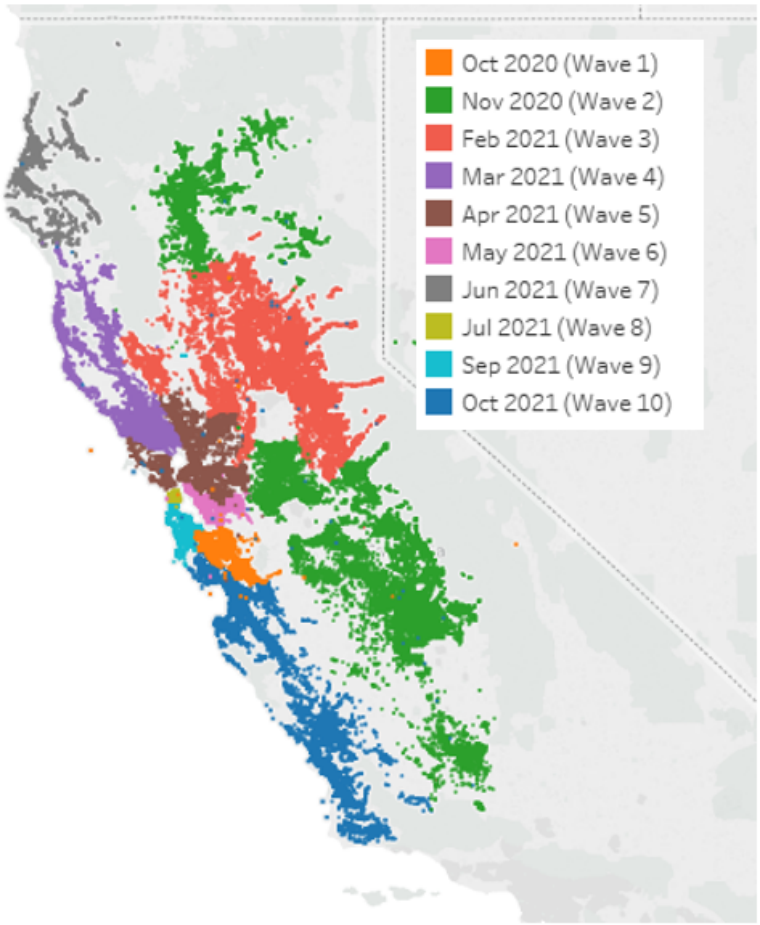
- The RTOU rate will be the new default rate for eligible residential customers
- Customers can elect to remain on their current rate plan or choose another rate plan at any time
- Solar customers will be transitioned to the new rate on their true-up date
  - They can also stay on their existing rate (typically E6)
  - Current E6 RTOU summer peak window is 3-8 PM
- PG&E is providing bill protection for one year and would like the CCAs to participate
- All details subject to CPUC approval (~July 2019)

Item 11 – Bill Protection Impacts

	TOU MORE expensive than Tiered Rate	TOU LESS expensive than Tiered Rate
Estimated Annual Generation Bill Difference ($)	$300,934	$141,697
Number of Customers Impacted	13,784	8,970
Annual Bill Impact/Customer	$21.83	$15.80

Total TOU-C Generation Revenue: $15,222,779

Item 11 - Draft TOU Rollout Plan

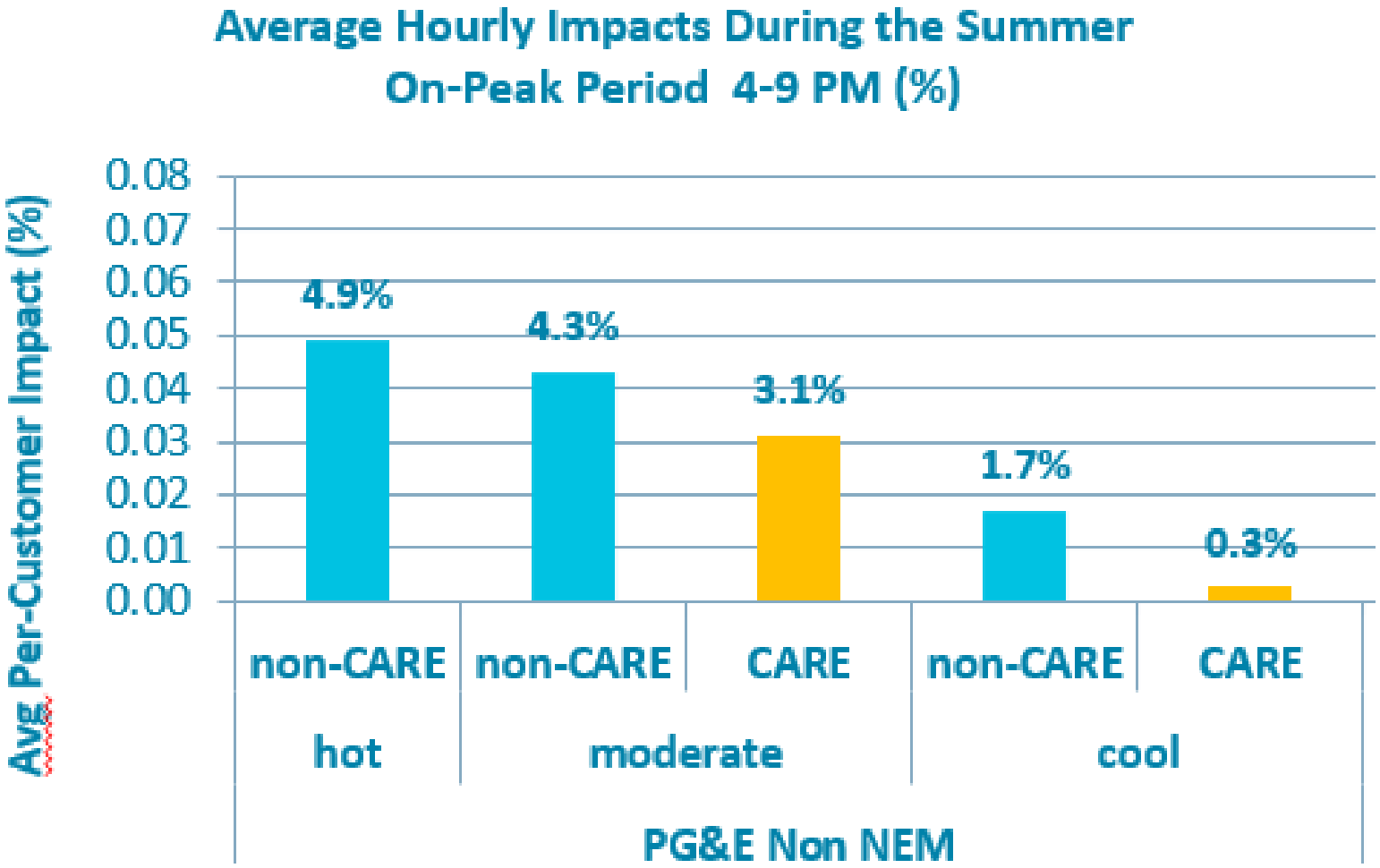


Counties	Service Provider Territory Included	Totals
Oct 2020 (Wave 1)		**394,836**
Santa Clara	San Jose Clean Energy (SJCE)	227,998
	Silicon Valley Clean Energy (SVCE)	166,838
Nov 2020 (Wave 2)		**200,876**
Fresno, San Joaquin, Kern, Tuolumne, Shasta, Madera, Merced, Tehama, Plumas, Stanislaus, Mariposa, Kings, Tulare, Lassen	PG&E Bundled	200,876
Feb 2021 (Wave 3)		**181,459**
Placer, El Dorado, Yolo, Butte, Nevada, Calaveras, Lake,	PG&E Bundled	118,183
Amador, Sutter, Yuba, Glenn, Colusa, Sacramento, Sierra,	Pioneer Community Energy (PIO)	43,125
Alpine	Valley Clean Energy (VCE)	20,151
Mar 2021 (Wave 4)		**136,031**
Sonoma, Mendocino	Sonoma Clean Power	136,031
Apr 2021 (Wave 5)		**409,382**
Contra Costa, Solano, Marin, Napa	MCE	307,341
	PG&E Bundled	102,041
May 2021 (Wave 6)		**398,624**
Alameda	East Bay Community Energy (EBCE)	369,913
	PG&E Bundled	28,711
Jun 2021 (Wave 7)		**38,695**
Humboldt, Trinity, Siskiyou	Redwood Coast Energy Authority (RCEA)	37,842
	PG&E Bundled	853
Jul 2021 (Wave 8)		**261,529**
San Francisco	CleanPowerSF (CPSF)	261,529
Sept 2021 (Wave 9)		**200,182**
San Mateo	Peninsula Clean Energy (PCE)	200,182
Oct 2021 (Wave 10)		**262,936**
Monterey, Santa Cruz, San Luis Obispo, Santa Barbara, San Benito	Monterey Bay Community Power (MBCP)	169,088
	PG&E Bundled	91,578
	King City Community Power	2,270

Note: Customer counts are approximate and depend on final exclusion criteria. Also, assuming NEM customers transition on their true-up date, each wave would have an additional ~10K NEM customers. This table assumes all customers within each CCA territory are enrolled with the CCA service provider.

Slide from PG&E

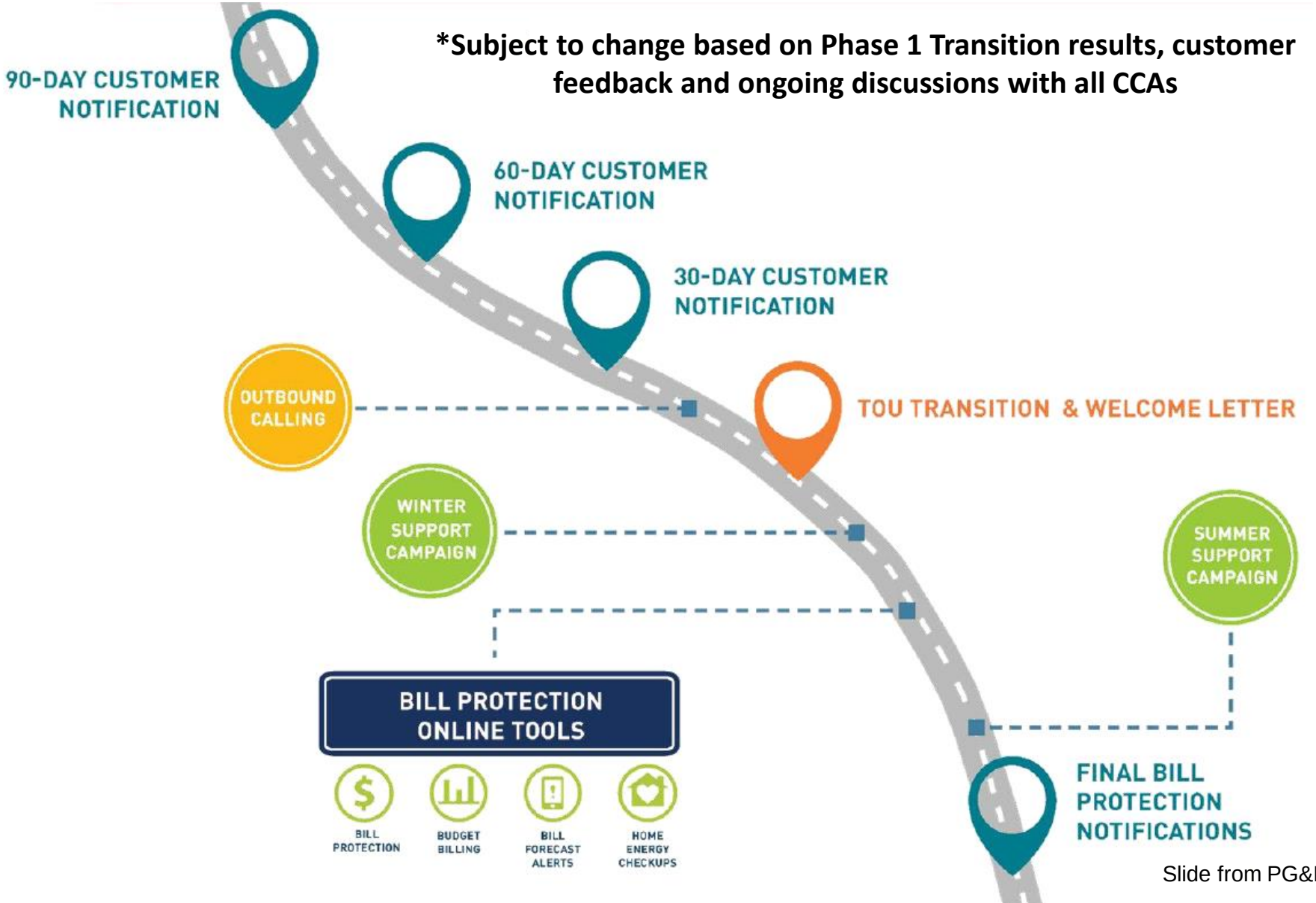
Item 11 - TOU Pilot Results – Electric Load Reduction



Slide from PG&E

Item 11 - TOU Transition Roadmap

***Subject to change based on Phase 1 Transition results, customer feedback and ongoing discussions with all CCAs**



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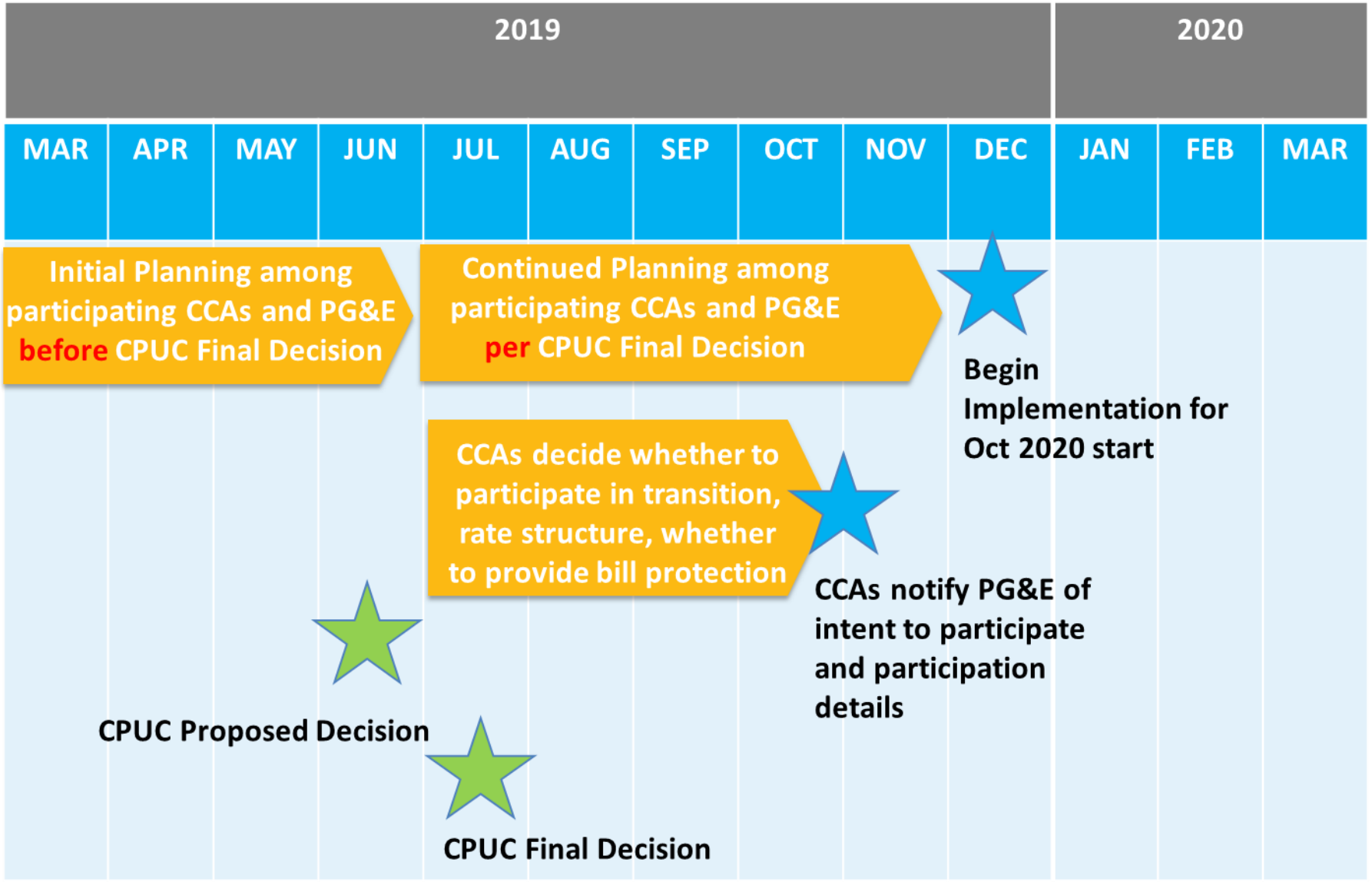
Item 11 - CCA/PG&E Joint Planning Timeline



Item 11 - Next Steps

- Joint presentation with PG&E to board (May)
- Board decision on VCE participation (late Summer)
- Continued VCE staff participation with TOU working group