Valley Clean Energy Board Meeting

Thursday, April 11, 2019

City of Davis Community Chambers, Davis, CA

Item 16 - 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 16 - 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 16 - 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**

Rejected applications:

- No permit filed – 1
- Not in California – 1
- No fixed price offered – 1
- Did not request full deliverability – 1
- Sited in RETI Cat 2 area – 2

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Item 16 - 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 16 - 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 16 - 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 16 - 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 16 - 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 17 - 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 17 - 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 17 - 2019 IEPR Filing Long Term Load Forecast
Customer Growth Forecasts

- Determined based upon SACOG growth forecasts in Housing and Employment
- Residential, small commercial, street lighting, and traffic control load growth tied to Housing forecast
- Medium and large commercial growth tied to Employment forecast
- Very Large Commercial – no growth assumed
- Ag – No growth assumed

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Item 17 - 2019 IEPR Filing Long Term Load Forecast
Customer Growth Forecasts

- Annual Growth Rates

Customer Class	Annual Growth Assumptions
Residential	0.72%
Street Lighting	0.72%
Traffic Control	0.72%
Small Commercial	1.22%
Medium Commercial	1.22%
Large Commercial	1.22%
Very Large Comm/Ind	0.00%
Ag	0.00%

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Item 17 - 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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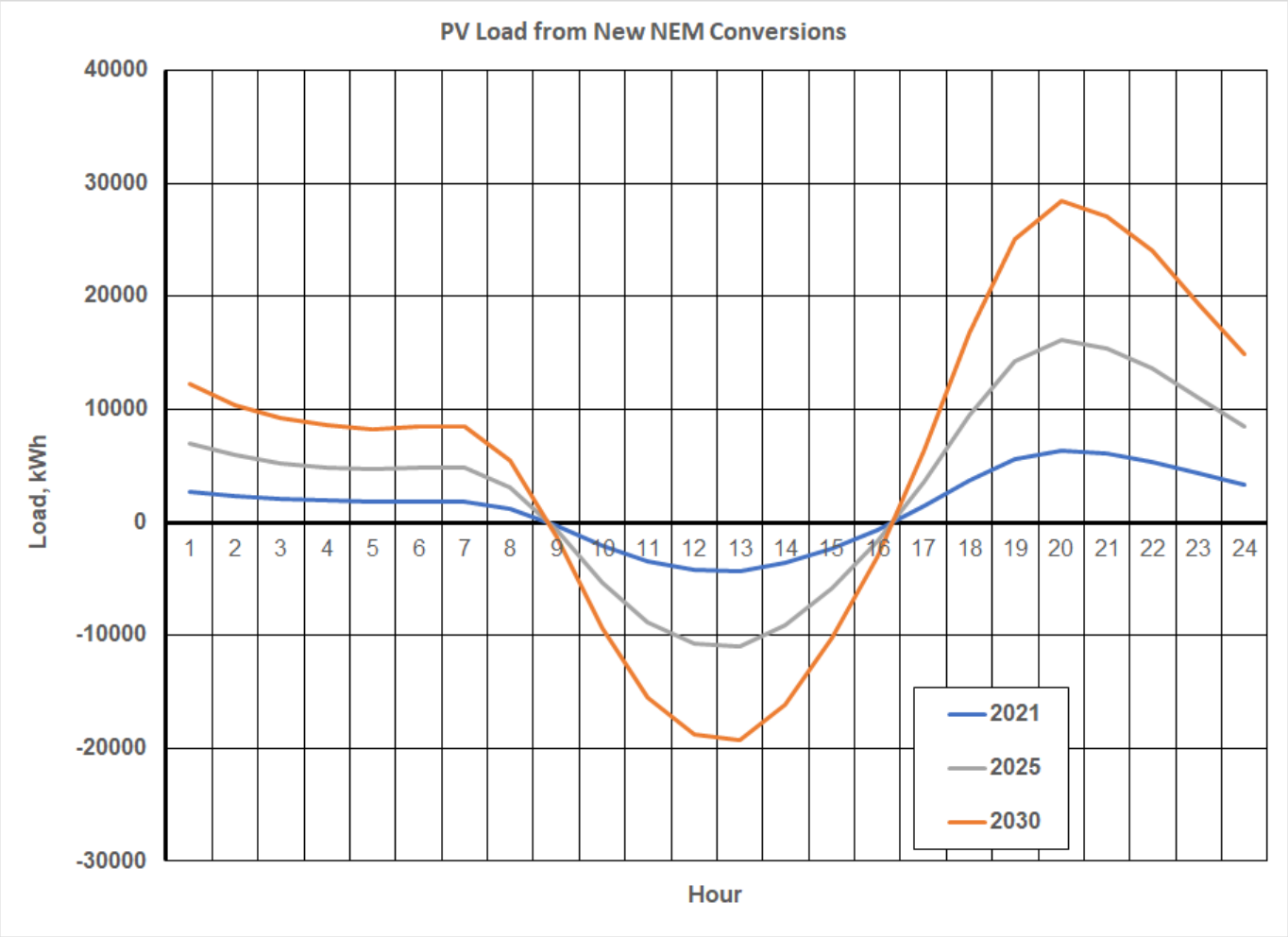
Item 17 - 2019 IEPR Filing Long Term Load Forecast
Net Metered PV Adoption

- 1000 installations/year for the forecast period.



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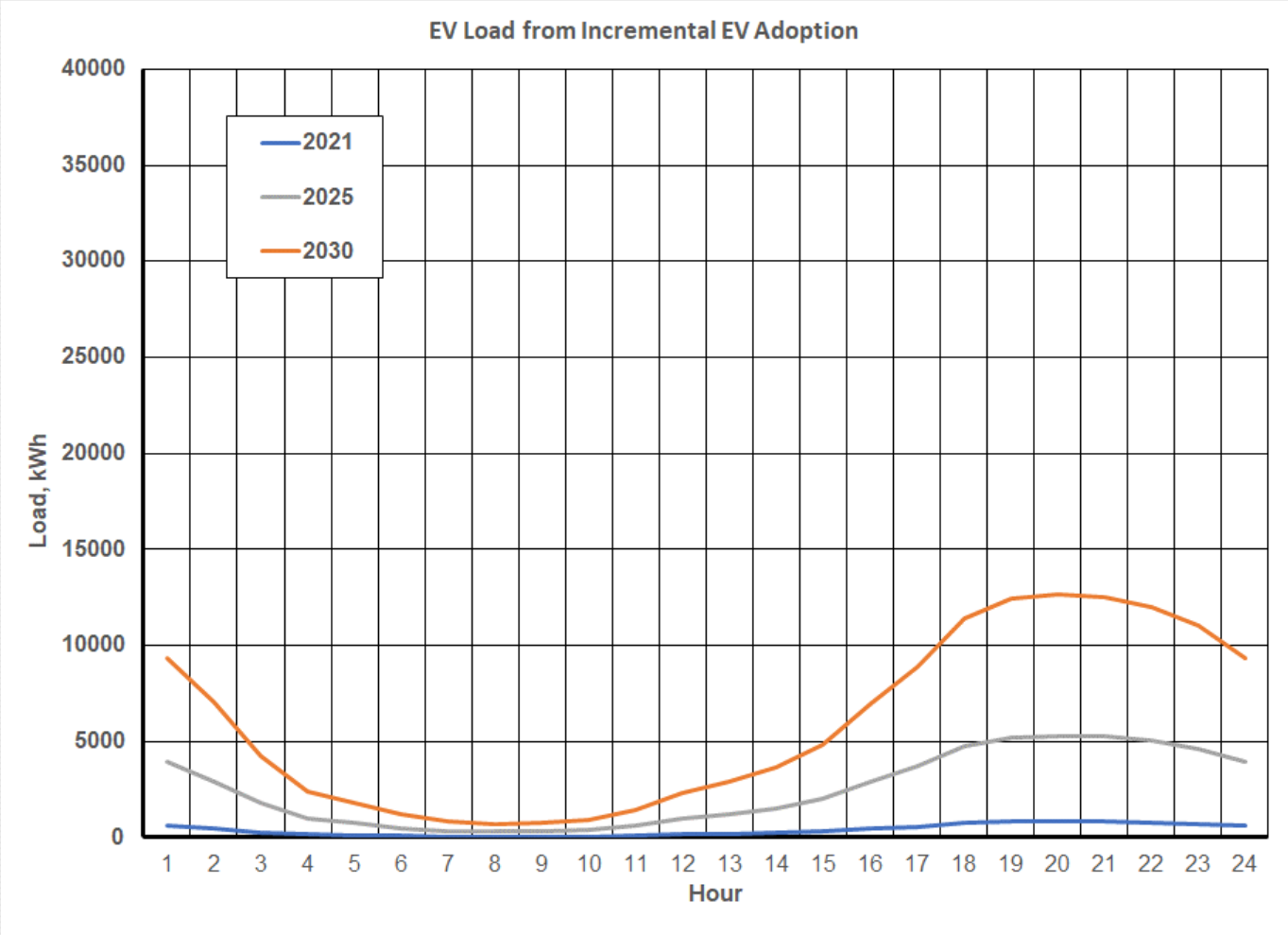
Item 17 - 2019 IEPR Filing Long Term Load Forecast
Electric Vehicle Adoption

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



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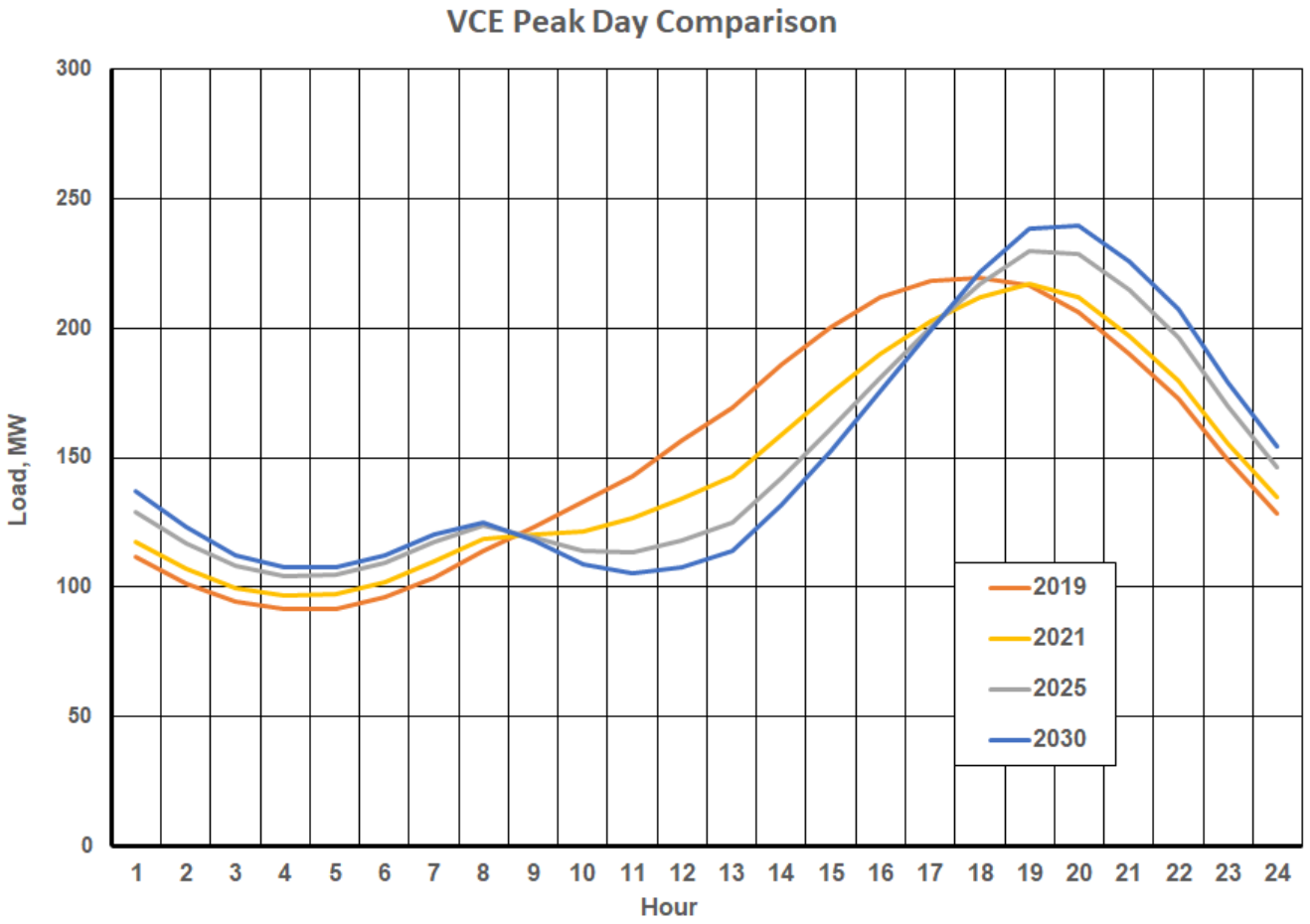
Item 17 - 2019 IEPR Filing Long Term Load Forecast
Peak Day Load Shape Transformation



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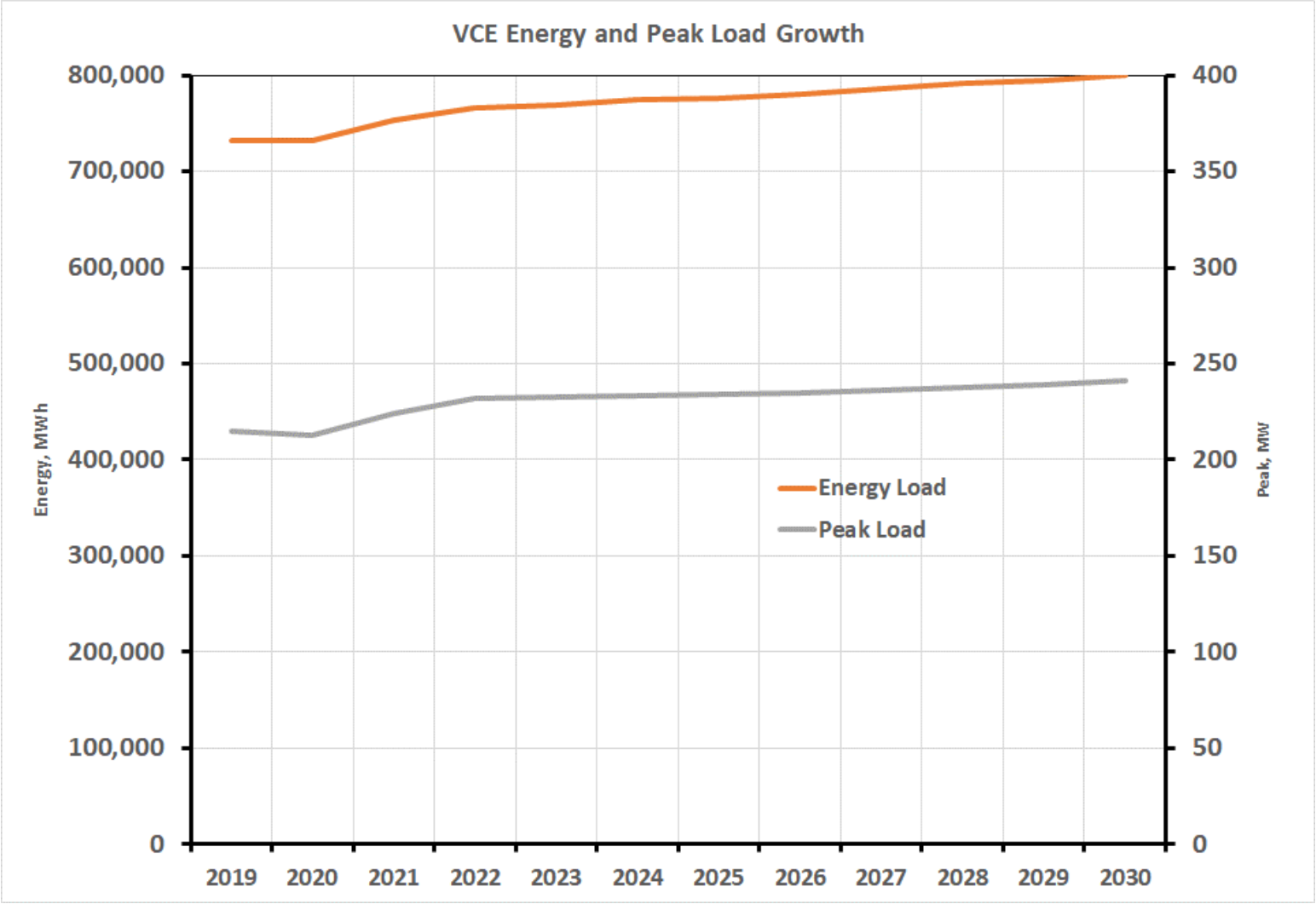
Item 17 - 2019 IEPR Filing Long Term Load Forecast
Annual Peak/Energy Loads



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Item 17 - 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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