

Flexible Load at PGE

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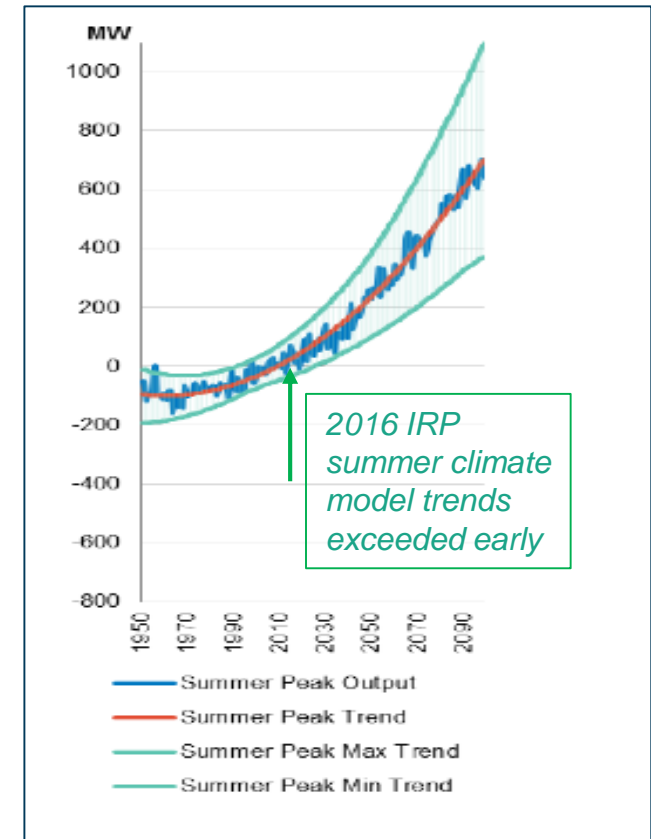


PGE Demand Response Planning Goals

- Nationally, most utilities focus DR development on summer peak: PGE is a rare dual season peaking utility
- PGE seasonal load is shifting to summer more rapidly than projected in the 2016 IRP climate study

2021 Goals		
	Summer	Winter
Low	40	36
2016 IRP Adopted	69	77
High	162	191

2025 Goals		
	Summer	Winter
Low	108	73
2019 IRP Adopted	211	141
High	383	297



Solutions Roadmap

Current Offerings

- Smart Thermostats
- Smart Water Heaters
- Residential Batteries
- Customer Microgrids
- Time-of-Use
- Peak Time Rebate



New 2022

- Rooftop Heat pump
- V2G (Demo)
- HPWH Single Family
- Line Voltage Thermostat
- Subscription + (Demo)



New for 2021

- Smart Home Charging
- Pole Charging
- Solar Option (Demo)
- Bus Charging (Pilot)
- Digital Market Place



Phase II

Phase II

		2020 Forecast		
Program (Owner)		Summer	Winter	aMW
DR	<i>thermostats</i>	24.9	8.4	15.1
	<i>flex 2.0</i>	14.6	11.0	12.80
	<i>Residential subtotal</i>	39.53152	19.37364	27.9
	water heaters	3.39	4.32	4.2
	energy partner (sch 25)	0.89	0.6	0.75
	energy partner (sch 26)	25.85	20.55	23.2
	<i>Commercial Subtotal</i>	30.13	25.47	28.15
	DR Portfolio Total	69.66152	44.84364	56.1



PGE's Smart Grid Testbed

Customer Value Propositions



Monetary
Q4 2019



Giving Back
Q1 2020



Carbon
Q3 2020



Giving Back V2
Q4 2020



Community
Q2 2021

Renewables

The PGE Smart Grid Testbed is a first of its kind collaborative effort between PGE, the OPUC, the Oregon Cities (Hillsboro, Portland and Milwaukie) to accelerate the future of the decarbonized smart grid.

Testing new ways to engage customers with new types of participation incentives

- \$5.9M of 2.5 years ending in at the of 2021.
- 20,000 customers are engaged and participating.
- Three embedded community representative focused on low income and Diversity, Equity and Inclusion challenges faced by PGE customers.
- Advancing new solutions, services and solutions for PGE all PGE customers
 - Peak Time Rebates – requires no technology to participate upward of 10% bill savings
 - Smart Thermostats
 - Smart Water Heaters
 - Grid Response, smart electric vehicle chargers
 - New smart electric vehicle rate designs
 - Residential battery storage
 - Demand response enabled ductless heat pumps
 - New approaches to large C&I and small, medium business smart grid programs
- Coordination on development and deployment of measures with Energy Trust of Oregon

