The Opportunity for Distributed Power Plants in Oregon

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Distributed Power Plants are distributed but centrally managed groups of customer distributed energy resources (DERs) that provide supply, reduce demand, and provide services to the grid when needed by a utility company

How Do DPPs Work?

1.

Home & business energy resources like solar + battery storage, EVs, and smart thermostats connect to the grid through a DPP

2.

Advanced software manages these systems, deciding when to store energy and when to send it to the grid.

3.

The DPP supplies extra power when demand is high, reducing strain on the grid and lowering costs for everyone.

4.

Participants receive compensation for providing clean energy and grid services.

The role of an “aggregator”

- Aggregators **manage communication, dispatch, and control** to deploy a large number of resources to provide the required grid services in the required quantity at the time the grid requires it.
- By working with aggregators, utilities keep their own **overhead and administrative costs lower,** which helps lower rates.
- Aggregators can handle **customer enrollment and marketing** and help scale DPP programs (e.g. opt-in at time of installation).
- Importantly, through third-party ownership (customer leasing) aggregators can make distributed energy resources become more **affordable and accessible** through offering **competitive financing** arrangements for customers.

We take tens of thousands of batteries, network them together with software and provide energy to the grid as though it was a single power plant.

Sunrun Head of Grid Services and
VPP Christopher Rauscher

By intelligently coordinating thousands of distributed energy resources, we're not just helping families save on electricity costs, we're fundamentally reimagining how communities access reliable, sustainable power during critical demand periods.

Ani Backa, GoodLeap Vice President of Virtual Power Plants

Why DPPs

Available Now – off the shelf technology to meet rising energy needs

No long permitting or construction timeline – **can be deployed in months not years**

Grid **reliability** AND customer **resiliency**

Incentivizes customers to do something they already want to do – centers **energy independence** in meeting growing demand

The Value of DPPs

40-60% less
than other power plants

$10 Billion
Customer savings if DPPs triple by 2030

"Big power doesn't have to come from big investments."
- Renew Home

DPPs are nonpartisan and market-driven

DPPs "offer a technology-neutral, market-based approach that harnesses the power of consumer choice and private investment to benefit the entire grid."
-Minnesota Conservative Energy Forum

"We should strive toward an energy system that seeks to remove barriers to innovation and enable vibrant ecosystems to accelerate opportunities for consumers to have access to affordable and dependable power systems, decide how and when they consume (and produce) the electricity they want and need, and invest in the solutions that bring them the greatest value." - American Enterprise Institute

The Scale of DPP Potential in Oregon

- Who can participate:
  - Existing solar customers ***with existing battery storage***
  - Existing solar customers ***who add new battery storage***
  - New solar customers with ***new battery storage***
  - Customers with ***smart thermostats and appliances***

- Oregon is ranked 10th in total installed residential storage with 4 MWh available for DPPs. Oregon's battery storage market is rapidly growing, with a 12% battery attachment rate Q424 → **year-over-year growth of 396%**

Why HB 3609?

HB 3609:

- Establishes **statutory directives** and timelines for **DPP deployment and operation**
- Creates market-based **compensation** for battery storage adoption
- Furthers **policy goals** in Oregon to have a larger share of energy come through customer-sited renewable energy resources
- Includes **protections** against utilities exercising their monopoly power for unfair competitive advantages over non-utility solar and battery storage providers.

Why do we need legislation, cont.

In short … the legislation creates **guardrails** that ensures **customer protections** and gives **policy guidance** to the PUC on key aspects of a DPP program to ensure program success.

While most utilities are free to implement some form of VPP without any policy or regulatory change, VPP deployment has so far been highest in areas where state regulators and policymakers have implemented VPP-supportive actions.

This lines up with a recent report from National Grid Partners, which found that nearly three-quarters (72%) of surveyed utility leaders say innovation at their organization is primarily driven by regulation or compliance.

Power Grid, Jan. 15, 2025, referencing the updated DOE VPP Liftoff report

Thank You

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