

Regulatory Templates For Utility Business Roles

EPRI DER Public/Private Partnership Phase 2

Initial Workshop

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Business Model Roles Summary

- **A: Providing DER-Related Services**
 - Role 1: Sell network management services, w/o owning DER assets
 - Role 2: Invest in (own or lease) DG at or near customer sites, and offer premium services to DER Customers
- **B: Deploying DER Assets and Infrastructure**
 - Role 3: Invest in DER equipment at Host Customer sites, without providing services
 - Role 4: Invest in advanced grid infrastructure
- **C: Using DER to Reduce Costs or Improve Reliability**
 - Role 5: Invest in DG to reduce wholesale power or system expansion costs, and/or improve system performance
 - Role 6: Offer DER Customers incentives to deploy or dispatch DER to provide value to the utility and its ratepayers



Regulatory Policies and Tools

- Curing throughput issue (decoupling or lost revenues, etc.)
- Rate base for investments (includes hardware related O&M and “allowed rate of return”)
- Expense recovery for non-investment related expenses (service-only may need profit “adder”)
- Rate design
 - Stand-by services, non-firm power, physical assurance
 - Other services customized to DER Customer needs
 - Drives economics for participating customers



Regulatory Policies and Tools

- Shared savings (a form of incentive for the utility to participate)
 - Savings may be those of participating customer or for “system” depending on activity
- Other positive incentives (ROR adders, cash bonuses, etc.)
- PBR (performance targets as condition to receiving incentives)



How Regulatory Policies Relate to Business Model Roles

Role	Decoupling/ Lost Revenues	Rate Base	Expense Recovery	Rate Design	Shared Savings	Positive Incentives	PBR Targets
1	✓		✓	✓	✓	?	?
2	✓	✓	✓	✓	✓	?	?
3	✓	✓	✓	✓		?	?
4	✓	✓		✓		?	?
5	?	✓		?	?	?	?
6	✓	✓-Minor	✓	✓	?	?	?



Related Questions

- Ownership of equipment (Roles 2, 3, 4 & 5)
 - Can distribution companies own generation facilities at all?
 - Is DG different than central generation?
 - Can utility own equipment sited on customer property or on the customer side of the meter?
 - Does utility ownership of equipment or delivery of premium services to select groups of customers present anticompetitive/antitrust issues?
- Does it matter:
 - Who controls or operates the equipment?
 - If the equipment serves only the site load?
 - If DER functions more as demand response than as wholesale supply?
- How should costs and benefits be allocated among customers that benefit directly from DER installations and those that do not? Roles 2, 3, 4



Related Questions

- How cost-effective is infrastructure investment?
- How should costs and benefits be allocated among stakeholders (participants and non-participants)?
- Are benefits driven by time-of-use pricing?
 - If so, should customer participation be voluntary or mandatory?



Related Questions

- Is the service:
 - “Above the line” (i.e. price regulated & set by tariff)?
 - “Below the line” (competitive, utility is price taker, not price setter)?
 - Leads to questions regarding competition, cross-subsidies, etc.



Regulatory-driven Approaches: Complementary Regulatory Policies

- Rate recovery of mandated DER investments
- Recovery of planning and acquisition costs
- Decoupling for customer-side energy efficiency, renewables and clean DG
- Other incentives
 - Higher returns on preferred resources
 - Possible inclusion of efficiency, demand response, and/or CCHP



Other Regulatory Policy Issues: Rate Design

- Important for most of the models
- But probably a better topic for later workshops
- Should recognize benefits of advanced metering and communications equipment (AMI)
 - Customer service
 - Outage identification and reporting
 - Improved real-time management of distribution network
 - More accurate load data



Other Regulatory Policy Issues: Rate Design

- DER-specific rate design: stand-by or back-up service
- Traditional regulation attempts to identify, allocate, and recover costs incurred to provide service
 - Rate design should recognize system benefits of DER
 - Provides methodology but DER uncertainties add complexity



Incentives Related to Environmental Performance

- Reward utilities for DER that meets specific emissions standards (or other environmental criteria, as appropriate)
- Texas, California, Connecticut, Maine, Massachusetts, and Delaware have all adopted DER emissions standards
- Provide a streamlined environmental process for “type certified” facilities
- Cash bonus if the utility surpasses minimum thresholds of clean DER energy output





Other Regulatory Policy Issues: Rate Design Guidelines

- Design rates to encourage desired outcomes
 - But should not render deployment falsely uneconomic or falsely economic
- Credits to retail rates may be offered to assure that DER is deployed when & where valuable
- Avoid ratchets and other rates that create unavoidable charges e.g. “as-used” demand charges (daily or monthly)



Other Regulatory Policy Issues: Rate Design Guidelines

- Offer optional stand-by services
- Non-firm power
- Physical assurance
- Other services customized to DER Customer needs
- Make level of standby optional for customer and based on value to customer
- Minimize or eliminate demand charges for services that require no investment in incremental capacity (e.g. scheduled maintenance & off-peak stand-by)