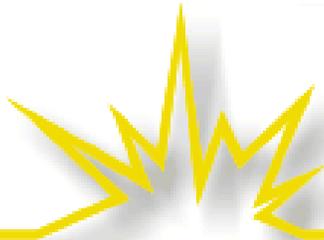


Profits and Progress Through Distributed Resources

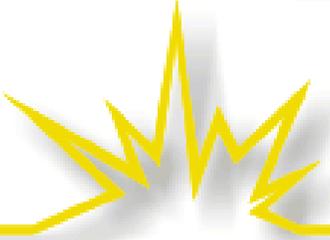


The Regulatory Assistance Project

50 State Street, Suite 3
Montpelier, Vermont USA 05602
Tel: 802.223.8199
Fax: 802.223.8172

Website:
<http://www.raonline.org>

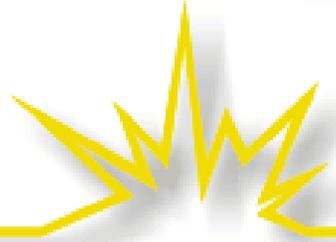
177 Water Street
Gardiner, ME 04345-2149
Phone (207) 582-1135
Fax (207) 582-1176



Introduction

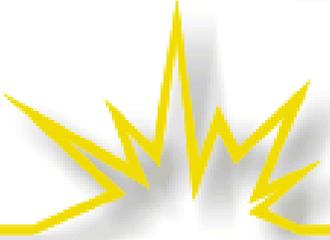
- Purpose: To see whether regulation may unintentionally cause utilities to be hostile to distributed resources and if so what regulatory fixes are available
- Purpose is not:
 - technical barriers
 - interconnection barriers
 - Zoning issues
 - others





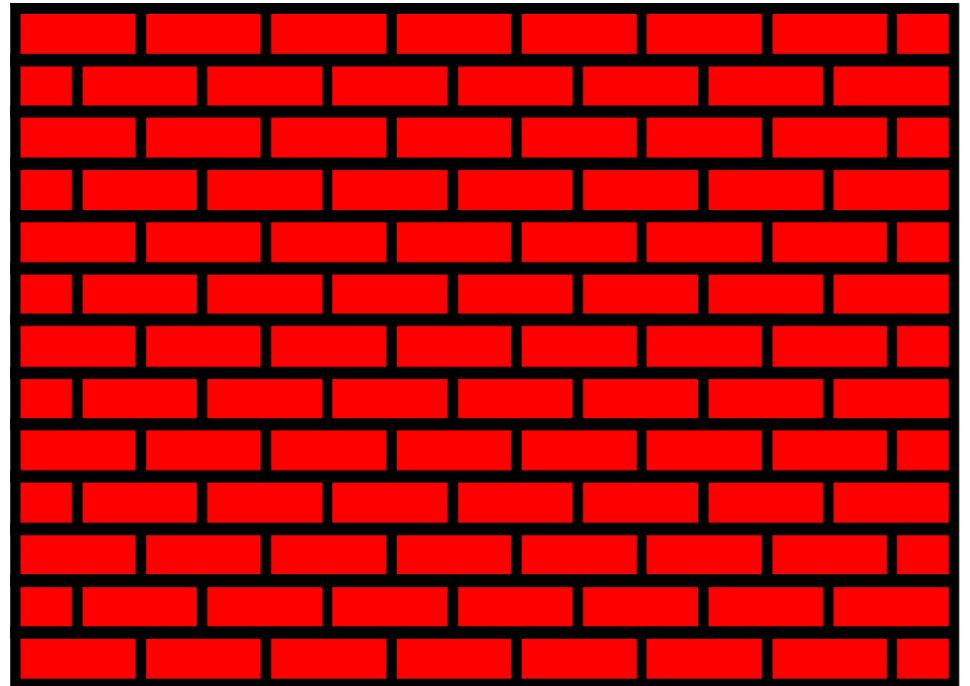
TurboGen

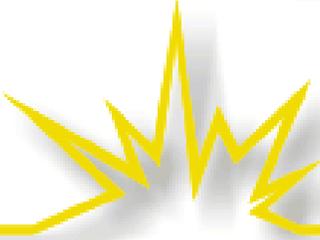




DR Barriers

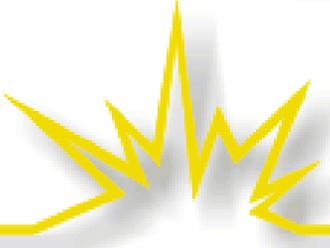
- Interconnection
- Interconnection standards
- Contracts
- Tarrifs
- Rate design





Why Regulators Should Care

- Save money
- Improve reliability
- Increase customer choice
- Cleaner environment

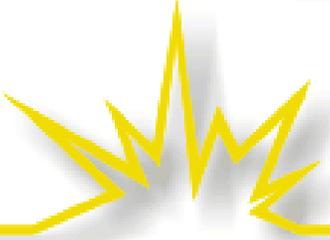


Profitability Background

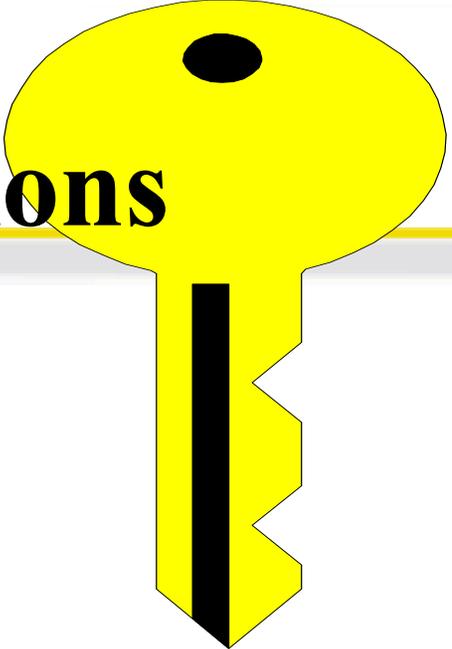
➤ To Whom

- Utility = Regulated entity
- Including profits of unregulated activities doesn't help
- fixing regulatory problems can help
- There are limits





Initial Conclusions



➤ DR

- Customer side or utility side
- High cost are or not

➤ Utility

- Price and cost structure
- Structure and ownership are not important

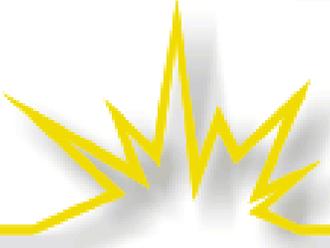
➤ Regulation

- Type of PBR
- FAC or anything like it
- Stranded cost recovery

Regulation Today

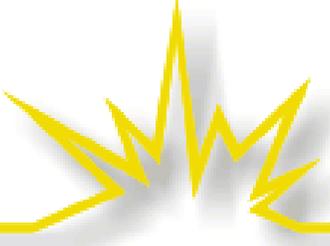


- **Regulation and utility profits do not work as you might expect!**
- Once case ends prices are all that matter
- Profits = revenue - costs
- $Rev = price * volume$
- Costs unrelated to volume
- Thus: if DR causes volume to decrease, utility profits drop



Policy Options

- PBR - Revenue versus price caps
- Price signals
 - De-Averaged Distribution Credits
 - Distribution Development Zones
- Symmetrical pricing flexibility - G&G
- Targeted incentives
- Stranded cost balancing accounts



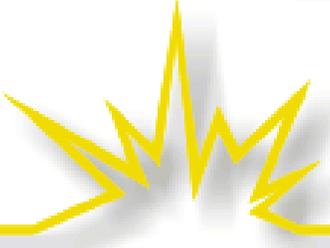
One Utility Strategy: Change Rate Design

➤ OPTION 1 \$25/month

- Utility profits not at risk
- Customer DR incentives drop
- Price caps and rev caps merge
- Financially behaves like a revenue per customer PBR
- Very large consumer impacts

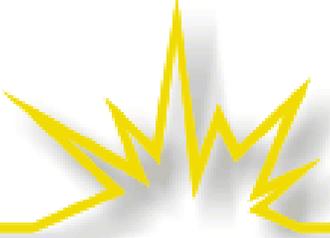
➤ OPTION 2 - 5 cents/kwh

- Utility profits at risk
- Large customer incentives for DR
- Most need for revenue based PBR



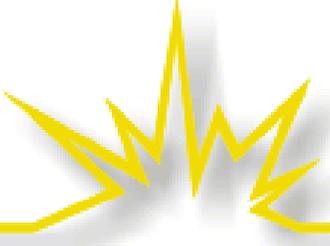
Price or Revenue Caps

- Both have same cost cutting incentives
- Revenue caps better match costs
- Revenue caps deal with DR lost sales disincentives without radical price reforms



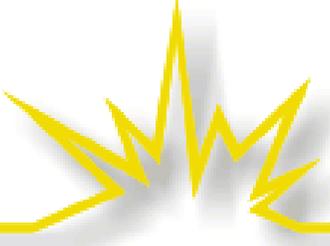
De-Averagerd Distribution Credits

- Geographically deaveraged prices would range from 0 to over 20 cents
- If deaveraged
 - Customers get right incentives
 - Utility incentives not yet clear
 - Consumers revolt, large equity impacts
- De-Averagerd Distribution Credits
 - Defined
 - Get customer incentives right, leaves room for shared savings, avoids risks of deaveraging



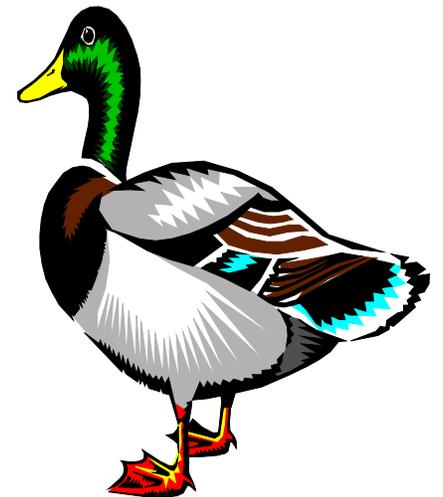
Disrtibuted Resource Development Zones

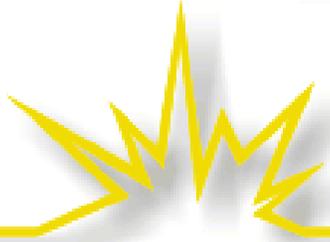
- Identify high cost areas
- Provide economic signal
 - Sliding scale hookup fees, variable standby rates, direct payments, etc



Symmetrical Pricing Flexibility

- Utilities want price flexibility to discourage non-cost effective DR
- Should be matched with requirement to increase price (perhaps through DR credits) in high cost areas





Areas For Research

- Each policy recommendation needs follow-up
 - For example, how would DR credits work
- Simplified cost methods
 - Site-by-site is too expensive
- FERC and ISO issues
- Rate design