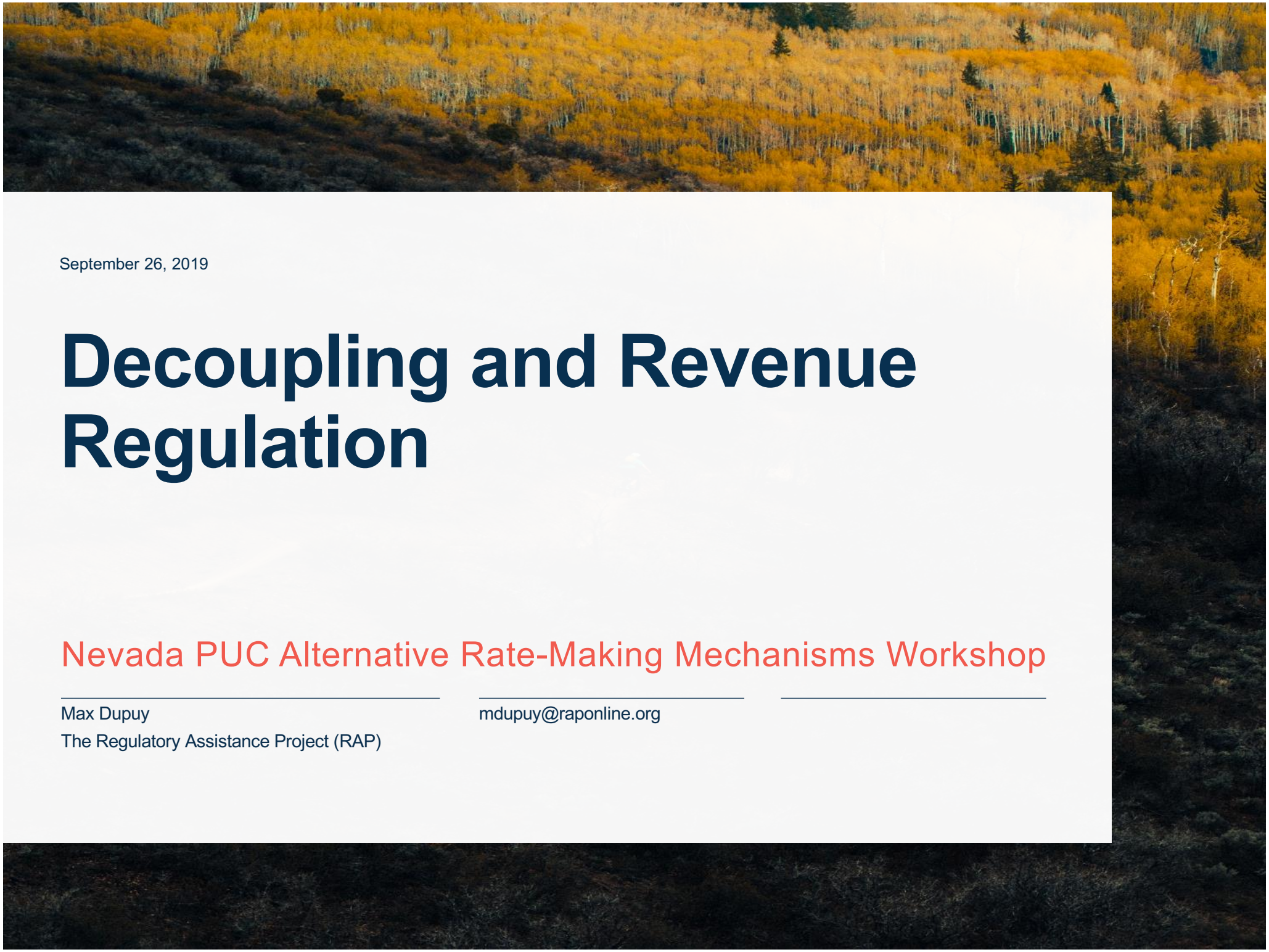

September 26, 2019

Decoupling and Revenue Regulation

Nevada PUC Alternative Rate-Making Mechanisms Workshop

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A Drawback of Traditional Regulation

Throughput Incentive: because utilities earn income through selling kWh, they have an incentive to maximize sales

What's the Problem with the Throughput Incentive?

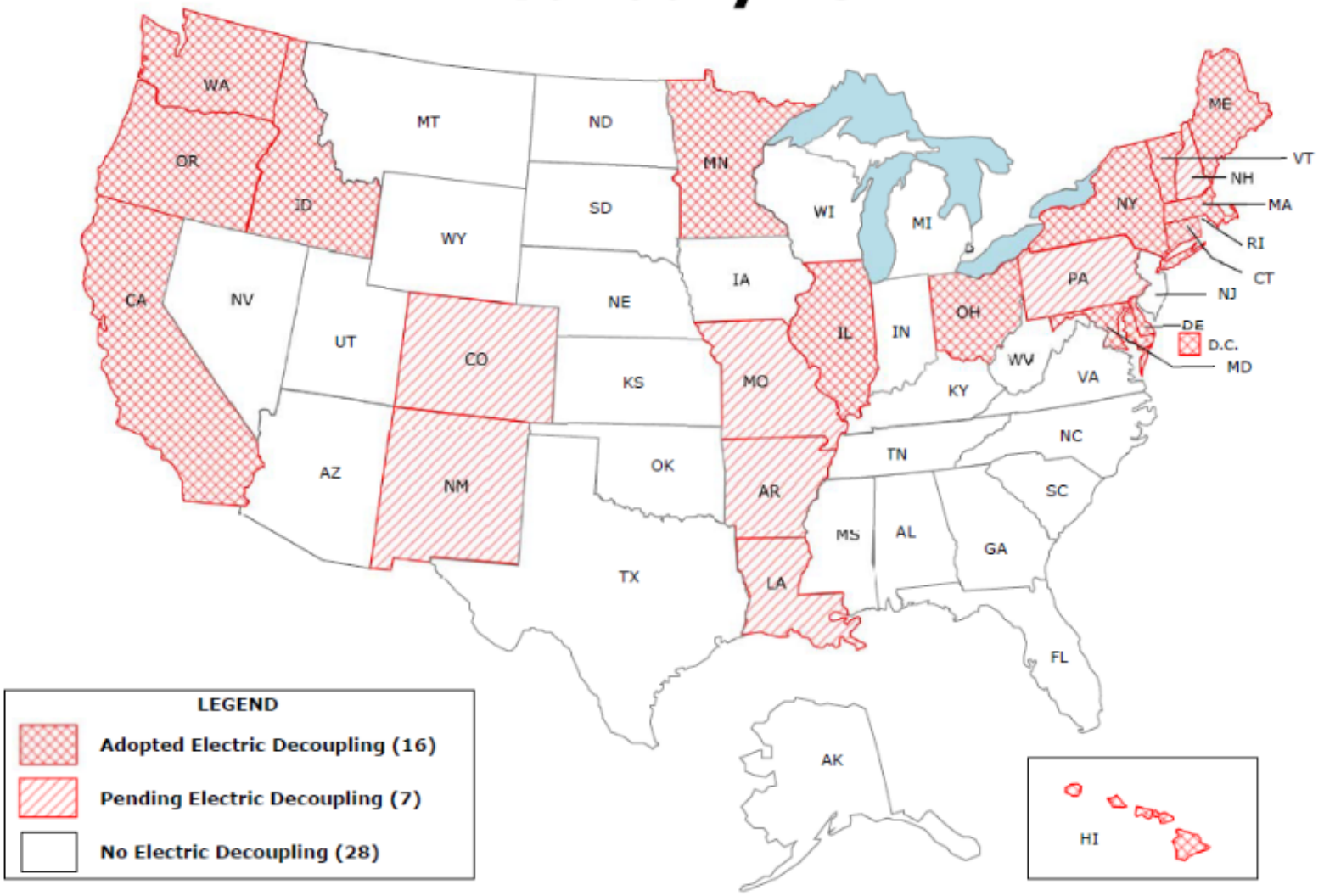
- Discourages end use energy efficiency
- Discourages customer-sited resources
- Distracts from a focus on policy goals
- Revenue volatility and higher cost of capital

- Too much other stuff matters for throughput to matter so much!

What is Decoupling and How does It Address the Throughput Incentive?

- Adjusts retail rates (prices) between rate cases
- When sales deviate from rate case assumption, rate is adjusted to collect allowed revenue

Electric Decoupling in the U.S.
January 2017



Comparing Decoupling with Traditional Regulation

- Traditional regulation sets prices and lets revenues rise and fall with sales volumes
- Most non-power costs vary little in the short run with respect to sales
- If prices are set to recover non-power costs by volume, then lower/higher sales means lower/higher revenues (and profits)
- Decoupling resets revenues to recover target non-power costs by adjusting the price

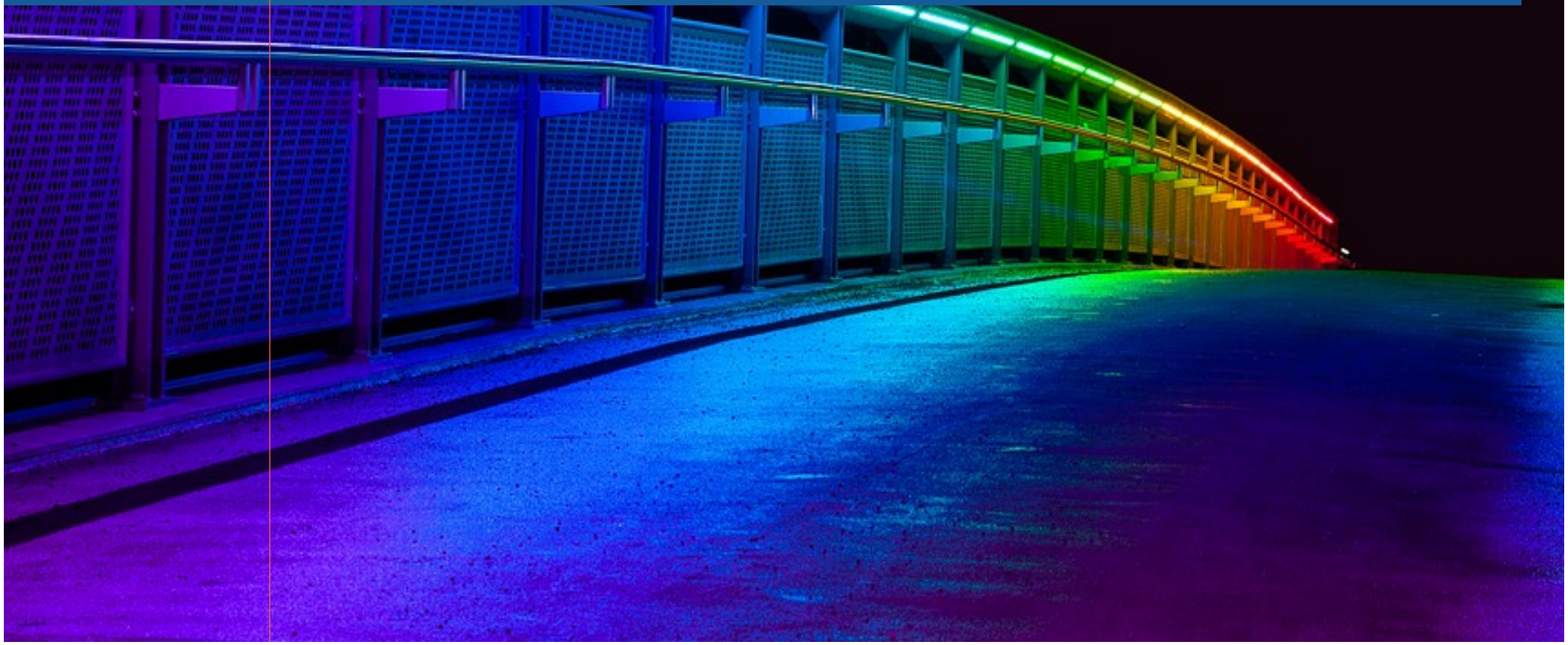
Decoupling Can Reduce the Throughput Incentive

- Focuses on allowed revenue
- Rates change to reconcile revenue
- No change in retail rate design required
- Multi-year solution
- Can be designed to achieve desired policy outcomes and protect consumers

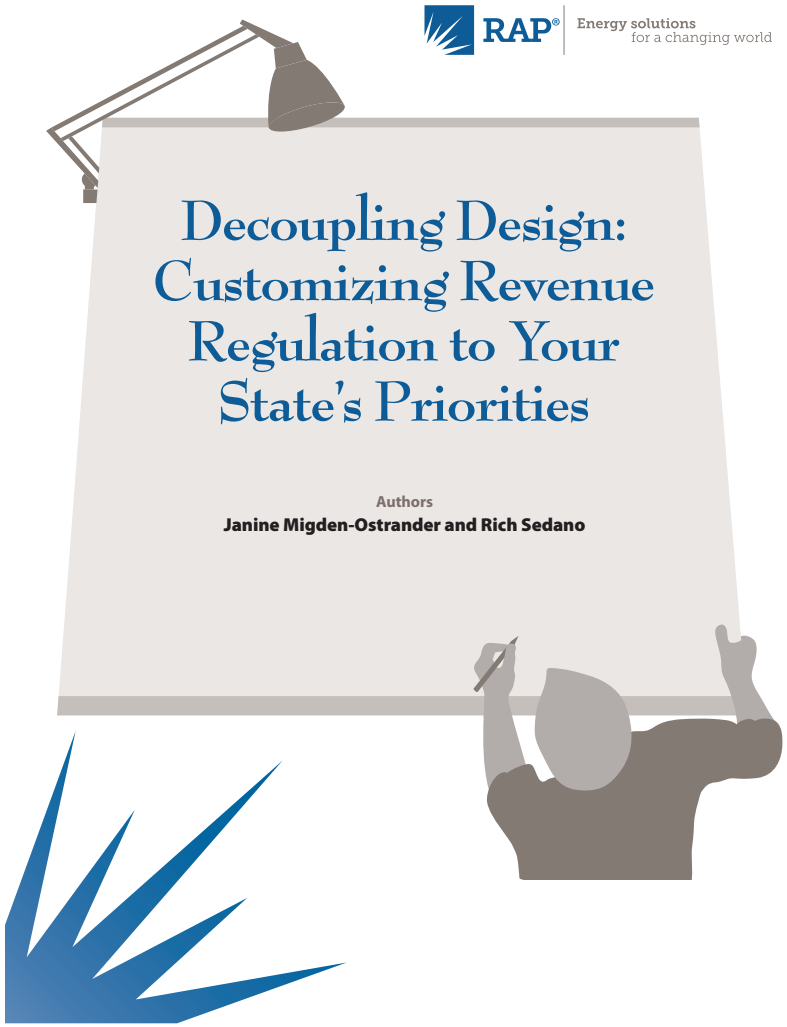
Decoupling Considerations

- Rates change more frequently (generally by less than power costs) and outside of a general rate case
- Great success with EE and DG will increase rates, even as total costs may ⬇⬇
  - Note that EE participants tend to save far more than rates tend to rise
- Stakeholder unfamiliarity with decoupling

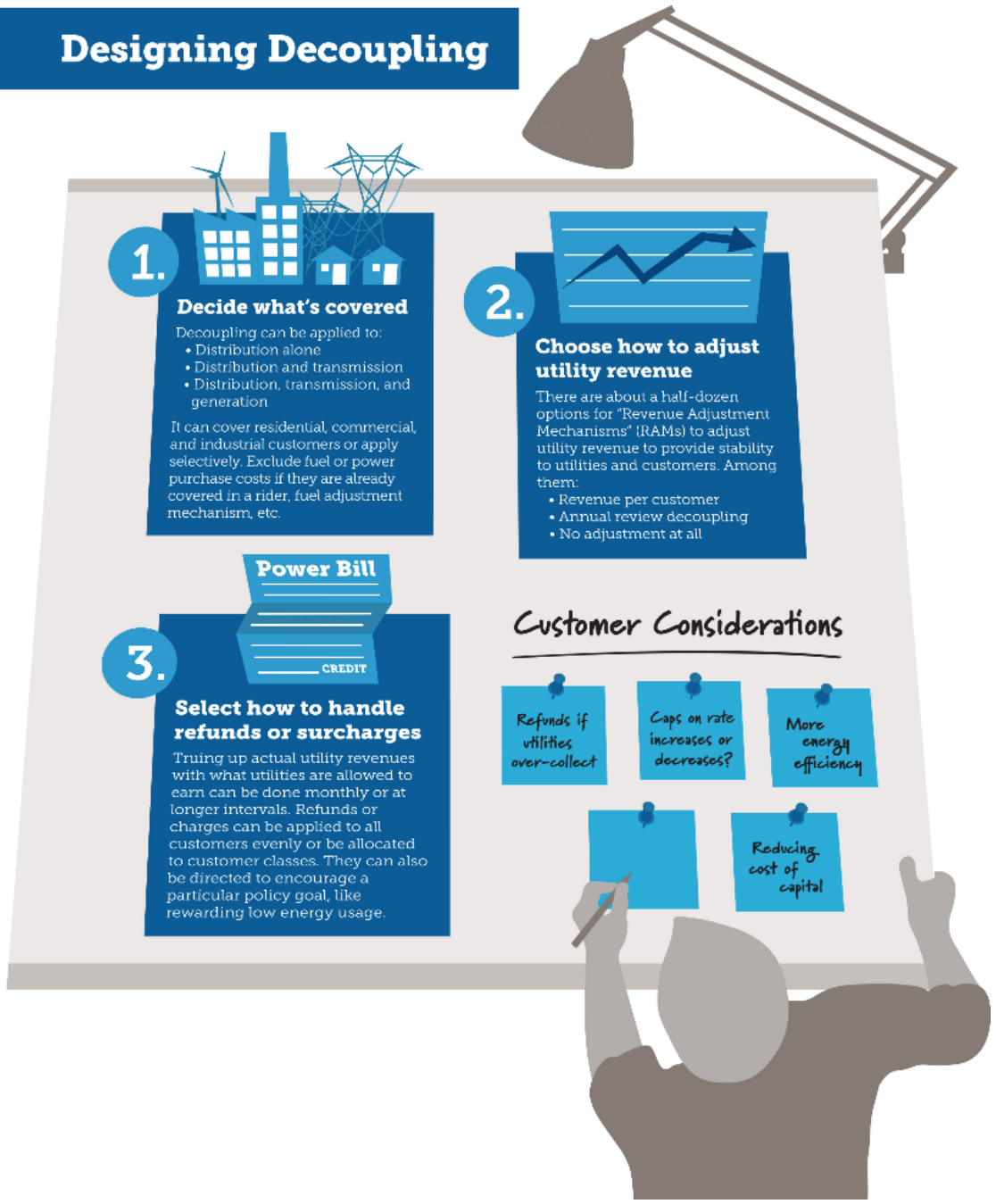
Options for Designing a Decoupling Mechanism



RAP Publication



Designing Decoupling



1. Decide what's covered

Decoupling can be applied to:

- Distribution alone
- Distribution and transmission
- Distribution, transmission, and generation

It can cover residential, commercial, and industrial customers or apply selectively. Exclude fuel or power purchase costs if they are already covered in a rider, fuel adjustment mechanism, etc.

2. Choose how to adjust utility revenue

There are about a half-dozen options for "Revenue Adjustment Mechanisms" (RAMs) to adjust utility revenue to provide stability to utilities and customers. Among them:

- Revenue per customer
- Annual review decoupling
- No adjustment at all

3. Select how to handle refunds or surcharges

Truing up actual utility revenues with what utilities are allowed to earn can be done monthly or at longer intervals. Refunds or charges can be applied to all customers evenly or be allocated to customer classes. They can also be directed to encourage a particular policy goal, like rewarding low energy usage.

Power Bill

CREDIT

Customer Considerations

- Refunds if utilities over-collect
- Caps on rate increases or decreases?
- More energy efficiency
- Reducing cost of capital

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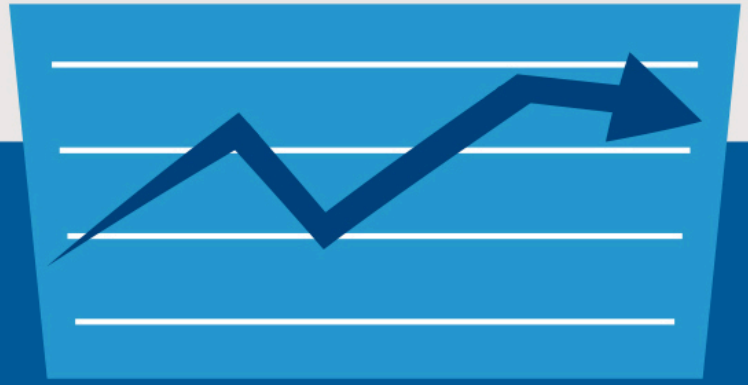

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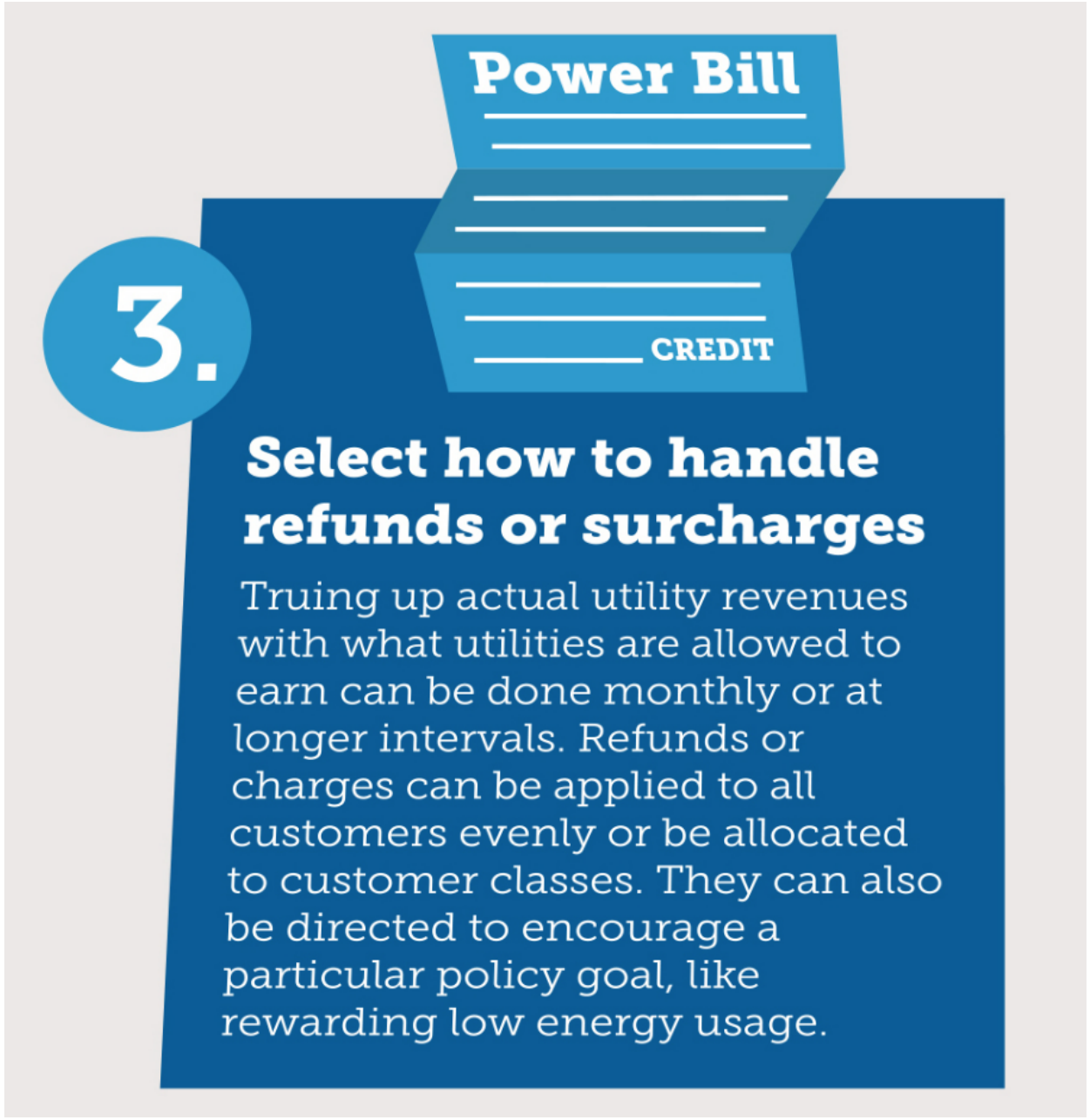
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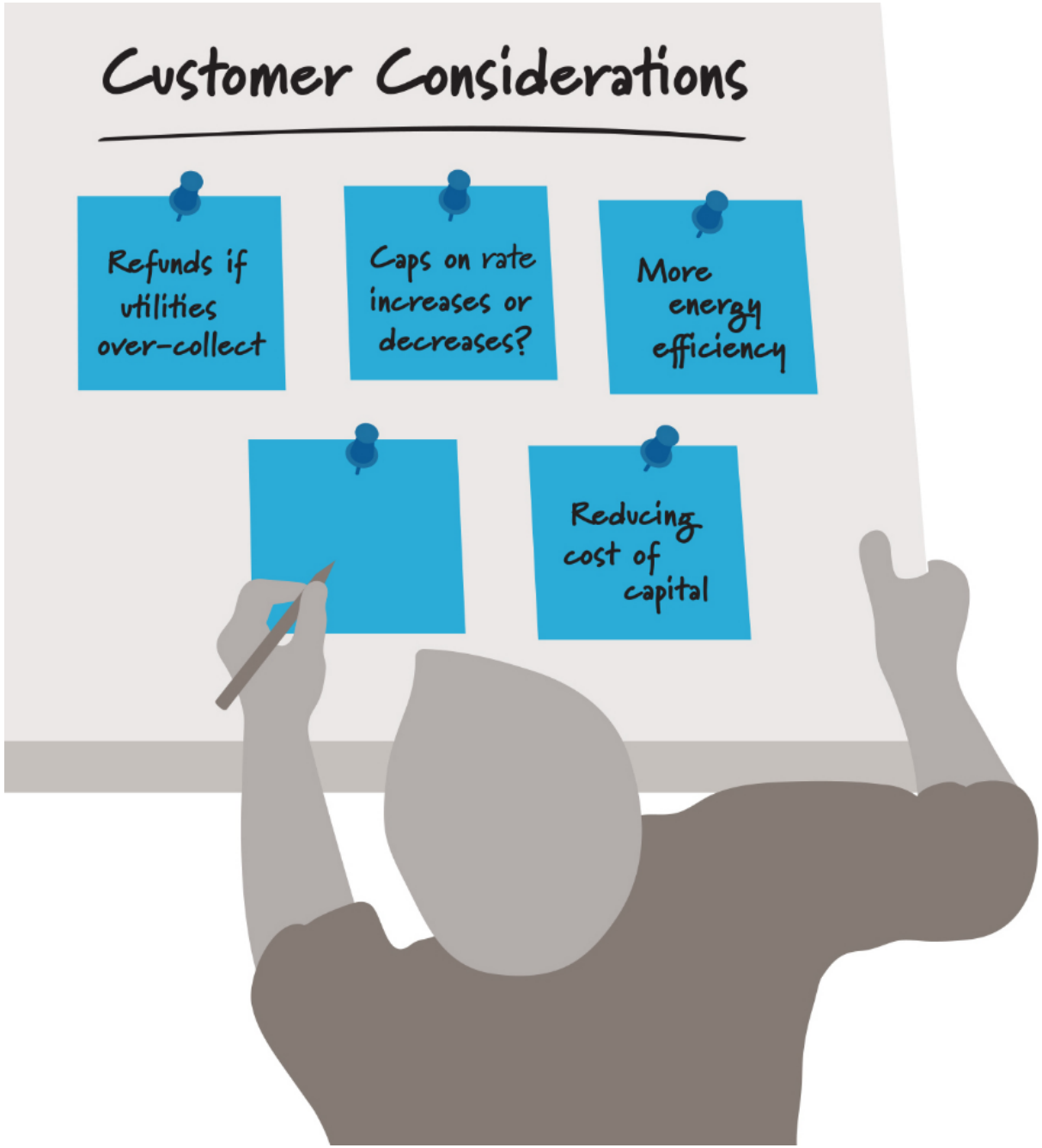
Customer Considerations
Refunds if utilities over-collect
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Design Approaches to Protect Customers

- Symmetry: ensure that credits are provided to refund any overcollections
- Stability: cap on rate changes or bands around size of rate adjustment (e.g., plus or minus 3%)
  - Provisions for carry-over of over or under recoveries
- Reduce revenue requirement to reflect lower utility cost of capital that decoupling can bring
- Direct more energy efficiency

Key Take-Aways on Decoupling

- Traditional approaches to regulation and rate design create a throughput incentive that is inconsistent with the public interest
- Decoupling addresses the throughput incentive, and:
  - It's flexible, customizable
  - It's been done before, models exist
  - It can serve policy goals
  - It can be designed to protect consumers

Decoupling Resources

- Revenue Regulation and Decoupling: A Guide to Theory and Application
- Decoupling Case Studies: Revenue Regulation Implementation in 6 States
- A Decade of Decoupling for US Energy Utilities: Rate Impacts, Designs and Observations
- Decoupling Design: Customizing Revenue Regulation to Your State's Priorities

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About RAP

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Learn more about our work at raponline.org