

Overview:

Business Models, Regulatory Templates, and Stakeholder Impacts

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for Electricity Providers to Integrate DER*

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Our challenge

- Some DER yield net societal benefits, some don't
- What will it take to integrate the ones that do?
- **Utilities are central players: to help, they must benefit**
(or at least not be harmed)
- **Regulators protect other stakeholders, who must also benefit**
(or at least not be harmed)
- **How can utilities benefit? What can they do to create value?**
What regulatory approaches support those roles?
- **How will other stakeholders share in any benefits?**
- **How can all stakeholders win?** (or at least not lose)



Why focus on the utility?

- Without utilities on board, it's hard to capture multiple DER value streams
- If utilities are motivated to make DER succeed, other stakeholders can also benefit
- Utility benefits are a first level of inquiry: if they're likely, the focus shifts to impacts on other stakeholders
- Utility benefits are necessary but not sufficient: others must also come out neutral or better
- Utility business models, including complementary regulation, drive the economic and financial analysis
- That analysis shows who gains, who loses, and how regulatory policy can optimize for multiple stakeholders



What do we mean by a ‘business model’?

- **How the utility will –**

- ❑ create value in the marketplace
- ❑ profit by capturing a share of that value
- ❑ sustain the business over time

- **Business model elements**

- ❑ **utility roles** (e.g., provide services, own assets, incentivize others, etc.)
- ❑ **others’ roles** (e.g., DER customer, 3d-party developer, aggregator, etc.)
- ❑ **regulatory treatment** (e.g., barriers, incentives, revenue impacts, etc.)
- ❑ **economic & financial impacts** (e.g., value streams & magnitudes, high-potential applications, project & aggregate impacts, stakeholder allocation)



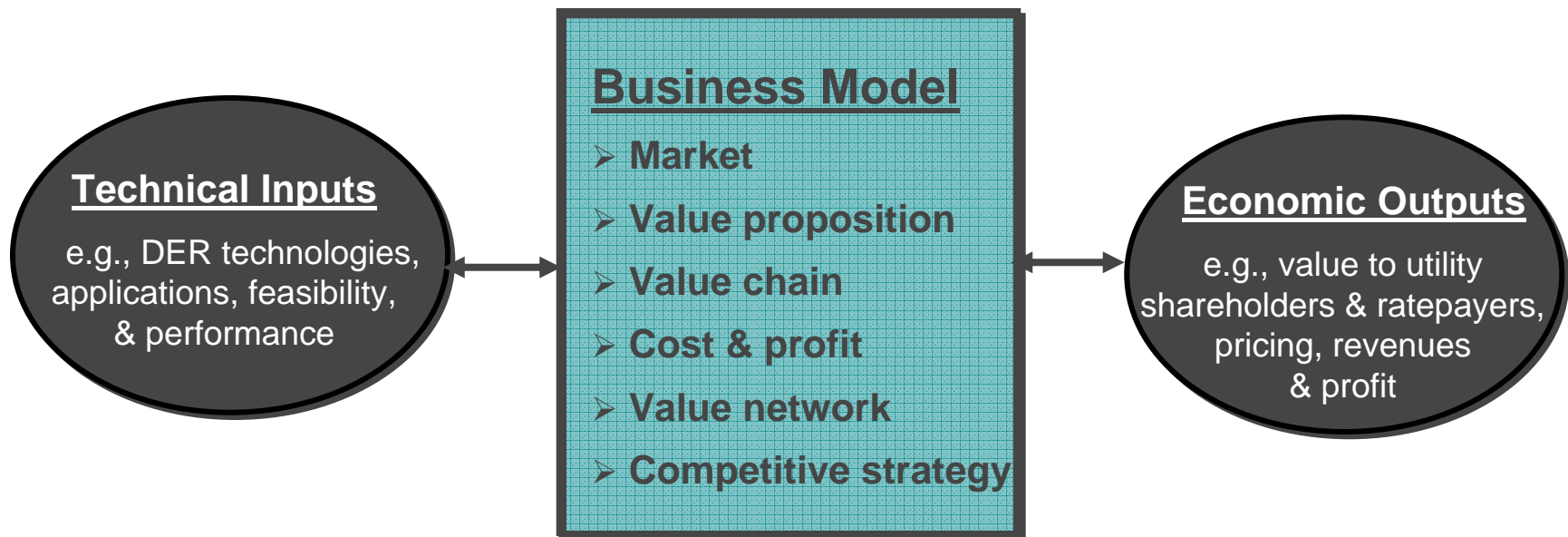
How can a business model help?

- It can –

- articulate the *value proposition*
- identify a *market segment*
- define the *value chain* structure
- estimate the *cost structure & profit potential*
- describe the *utility's position* in the value network
- formulate its *competitive strategy*



Business Model, Illustrated



What do we mean by ‘regulatory template’?

- Different utility roles raise different regulatory issues and require different regulatory treatment to succeed
- ‘Regulatory templates’ are sets of regulatory policies that facilitate particular utility roles. *Examples:*
 - revenue decoupling + expense recovery + shared savings (for utility network management services supporting DER)
 - rate-base treatment + revenue decoupling + expense recovery + anticompetitive safeguards (for utility DG investment at host sites)
 - rate-base treatment + shared savings on purchased power (for DG investment on grid side to reduce wholesale power costs)



How will we measure 'stakeholder impacts'?

- **Focus on DER costs and benefits**
 - identify DER value streams
 - quantify potential values for each stream
- **Focus on different stakeholder perspectives**
 - benefits to one stakeholder may be costs to another
 - the goal is to benefit all in some way, while harming none
- **Model stakeholder costs and benefits**
 - for single DER installations of varying types
 - for aggregated impacts of multiple installations
 - on utility financials
 - on ratepayers
 - on society



Today's Program

- **Business model elements**

- utility roles (e.g., provide services, own assets, incentivize others, etc.)

- others' roles (e.g., DER customer, 3d-party developer, aggregator, etc.)

- Jim Torpey** (Madison Energy Consultants)

- regulatory treatment (e.g., barriers, incentives, revenue impacts, etc.)

- Wayne Shirley** (Regulatory Assistance Project)

- John Nimmons** (John Nimmons & Associates)

- economic & financial impacts (e.g., value streams & magnitudes, high-potential applications, project & aggregate impacts, stakeholder allocation)

- Snuller Price & Michele Smart**

- (Energy & Environmental Economics, San Francisco)

