



# STAKEHOLDER PERSPECTIVES ON DISTRIBUTION TARIFF REFORM

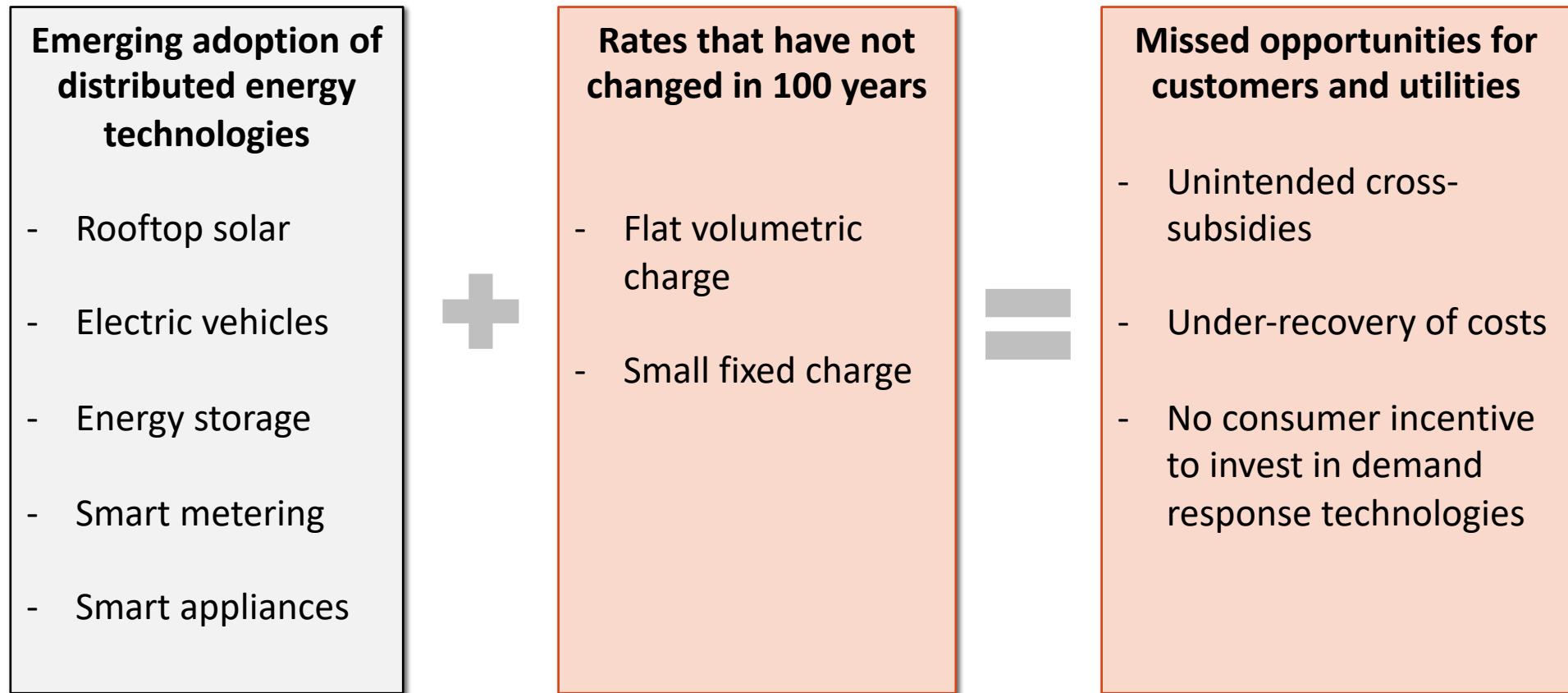
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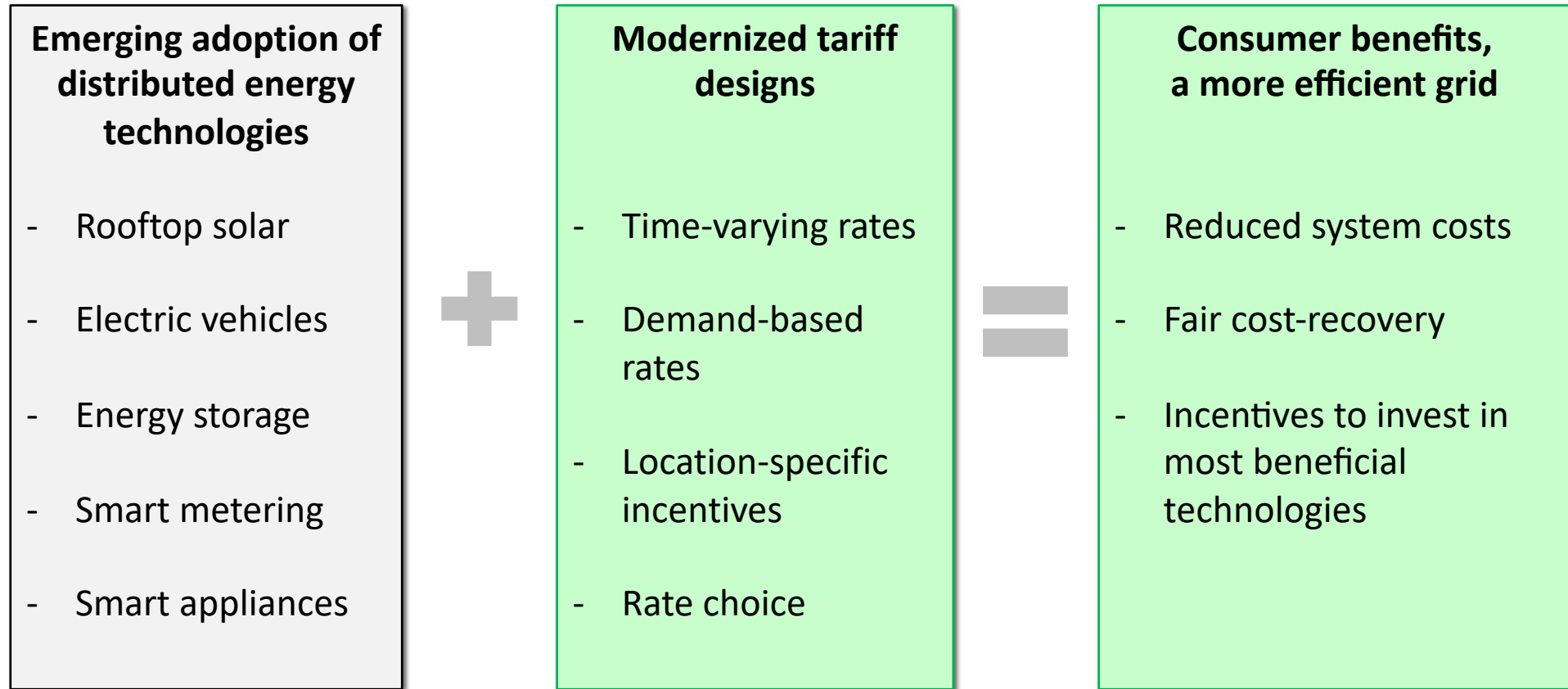


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# Distribution tariff reform is needed



# Improved tariff design presents new opportunity



# Internationally, four tariff reform options are commonly considered

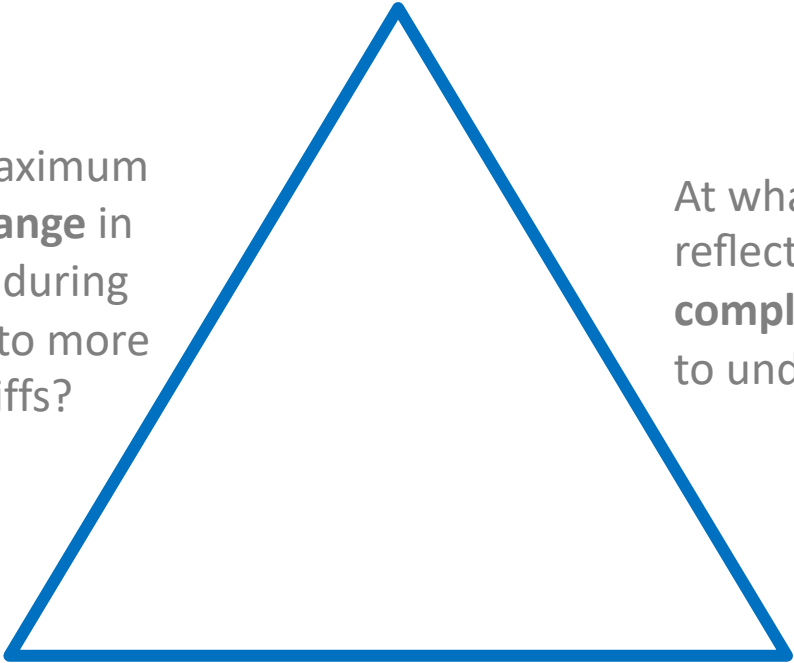
1. Shift revenue collection to a **fixed** charge
2. Introduce **demand-based** charge
3. Make the volumetric charge **time-varying**
4. Replace net energy metering with **net billing**

# The challenge is in balancing competing priorities

## Cost Reflective

What is the maximum **acceptable change** in customer bills during the transition to more cost based tariffs?

At what point is a cost reflective tariff **too complex** for customers to understand?



## Bill Impact

Do simple tariffs lead to significant **over/under-payment** by certain customer segments?

## Simplicity/ Acceptability

# Stakeholders view tariff reform options very differently

## Observed Stakeholder Support for Tariff Reform Options

	Rooftop Solar	Energy Efficiency	Low Income Consumer	Electric Vehicles
Increased fixed charge	○	○	○ <sup>1</sup>	◐
Demand charge	○	◐	○ <sup>1</sup>	○ <sup>2</sup>
Time-varying volumetric charge	●	●	○ <sup>1</sup>	●
Net billing	◐	N/A	●	N/A

**Key**

- Strongly opposed
- ◐ Possible support in some cases
- Preferred option

Notes:

[1] Support would increase if the rate is offered to DG customers as a separate class

[2] Support would increase if the demand charge is restricted to peak hours

# Top three stakeholder concerns

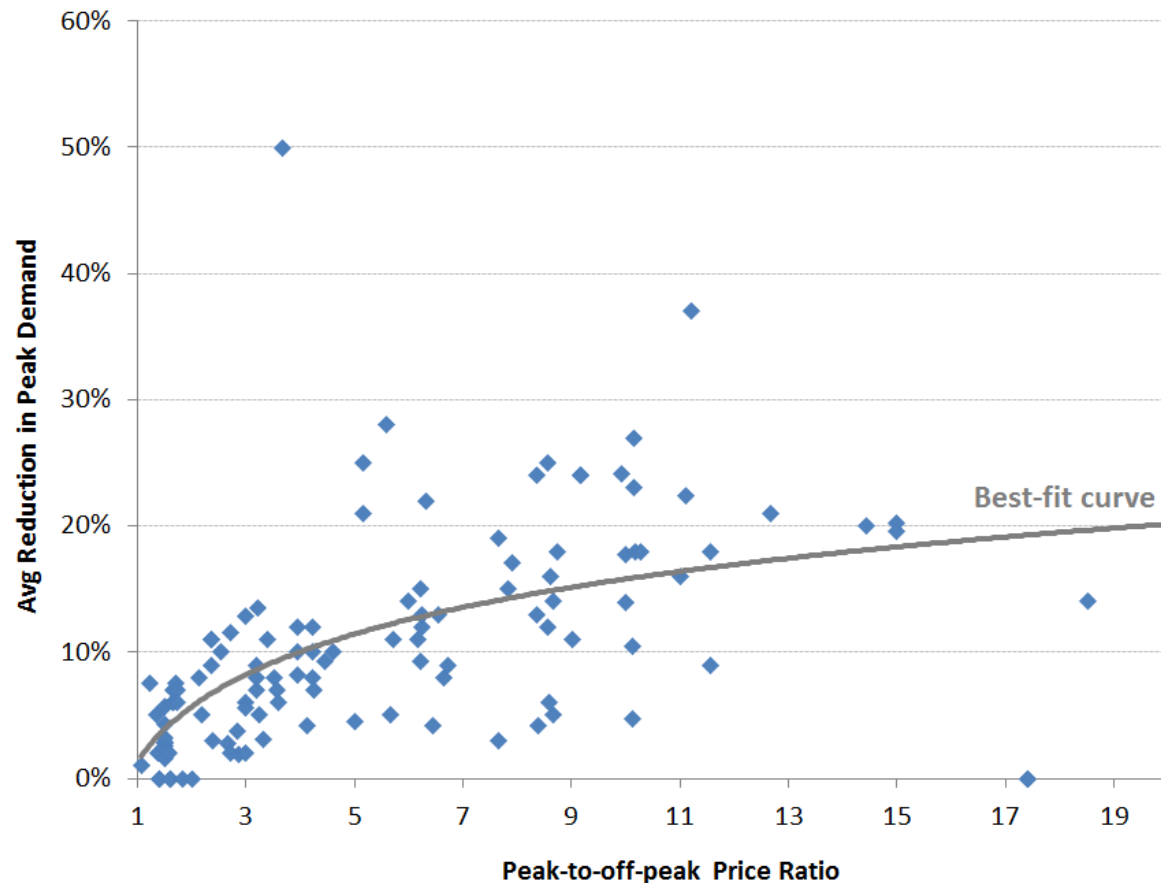
- 1. “Customers will not accept new tariff designs”**
- 2. “Customers cannot understand the new tariff designs”**
- 3. “Bills will increase for low-income customers”**





# Customer understanding of new tariff designs

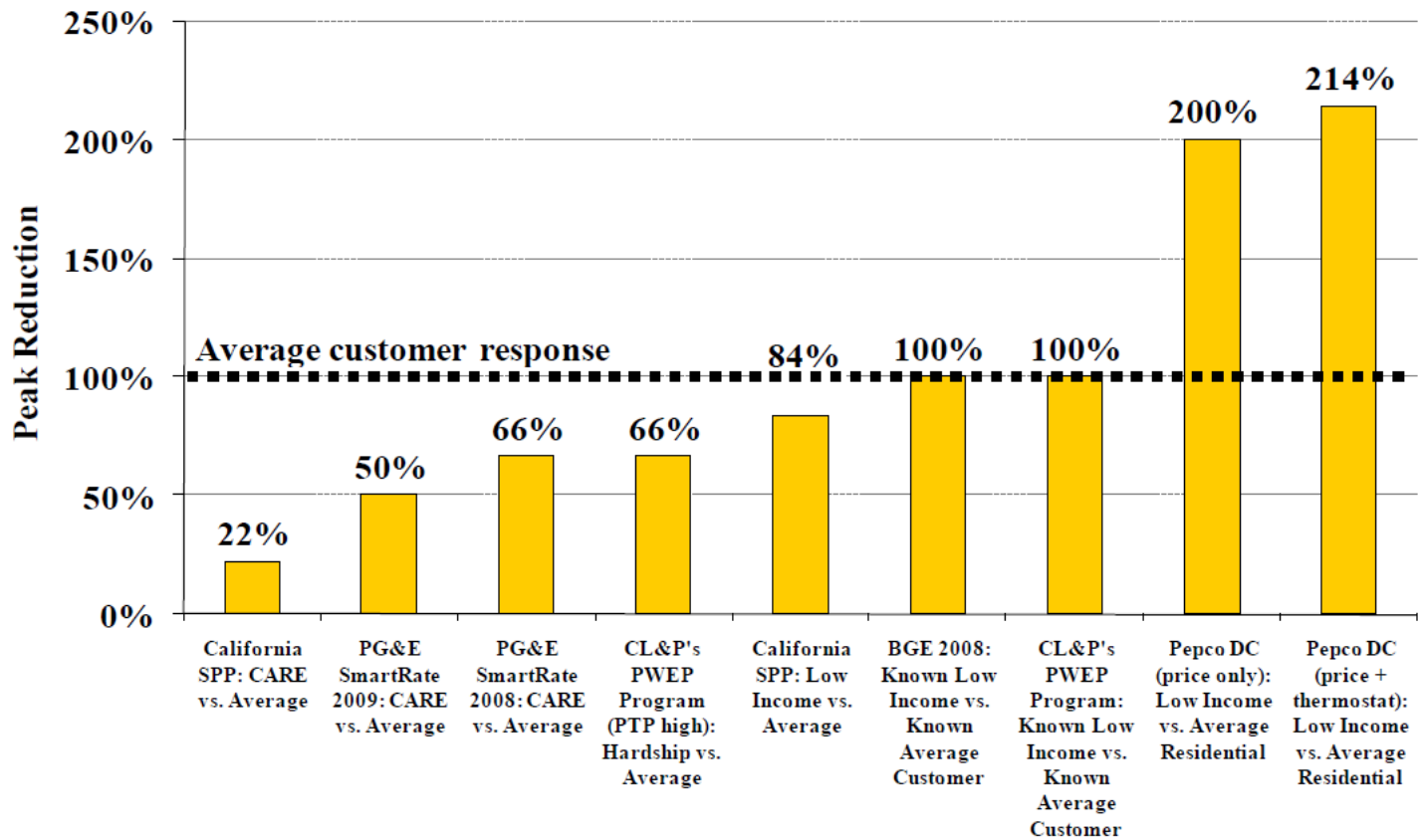
## Results of International Pricing Pilots



- 300+ international pricing tests have found that customers respond to new tariff designs
- Price response persists for multiple years
- New tariffs can be explained to customers in simple terms:
  - “Save money by reducing usage between 3 pm and 7 pm”
  - “Avoid using several electric appliances at the same time”

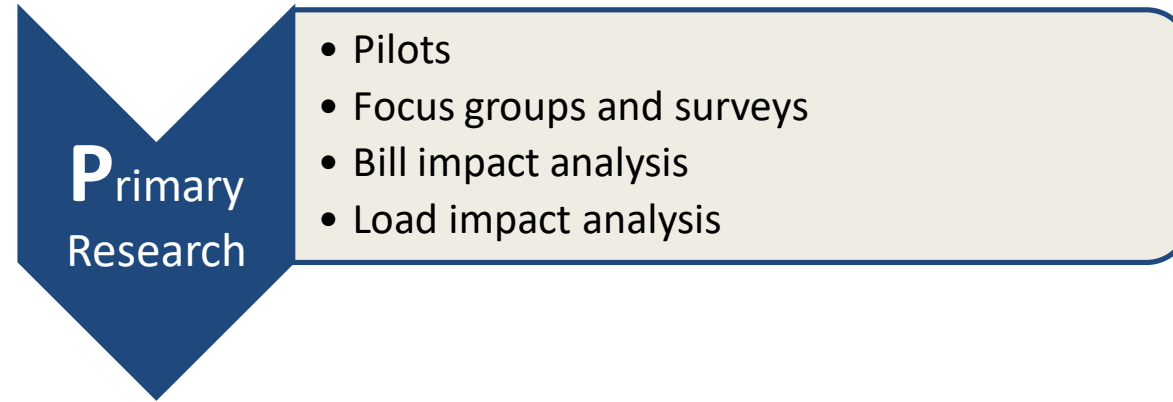
# The impact on lower-income customers

## Price Responsiveness of Low-Income Customers

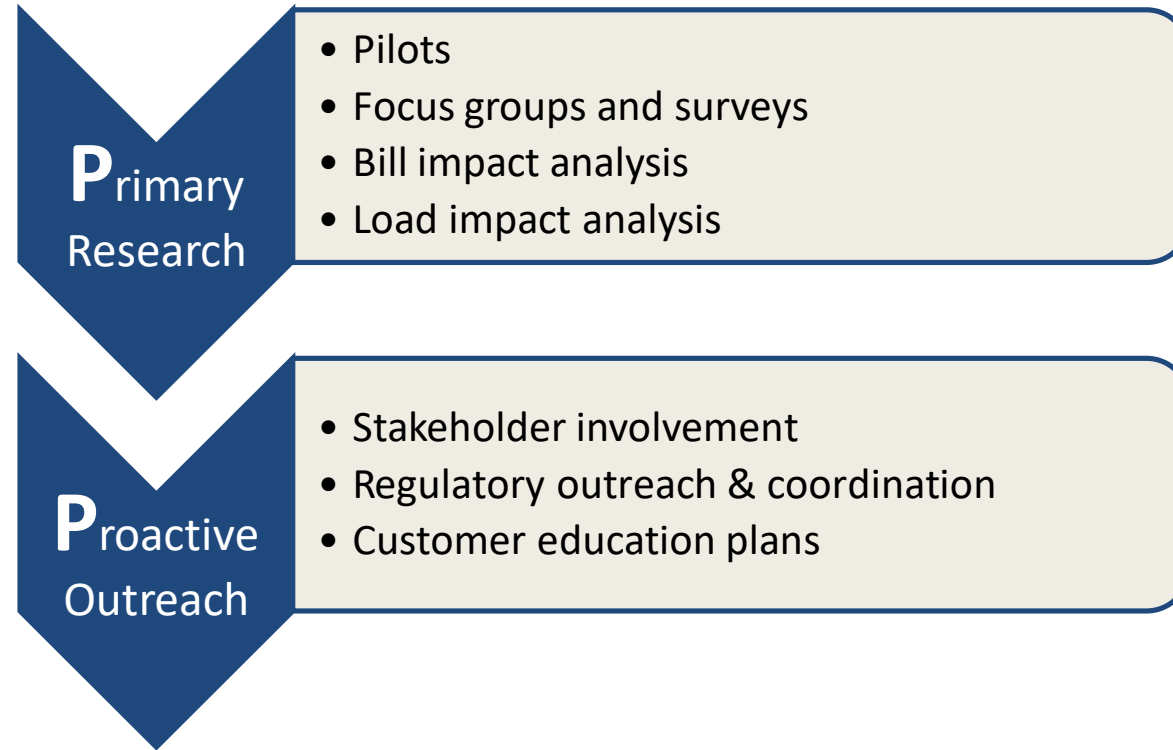


- Empirical evidence shows that low income customers do respond to price, sometimes more than the average customer
- Low income customers are not necessarily small customers; they often automatically benefit from the transition to a new tariff
- Financial assistance can be provided outside the tariff design

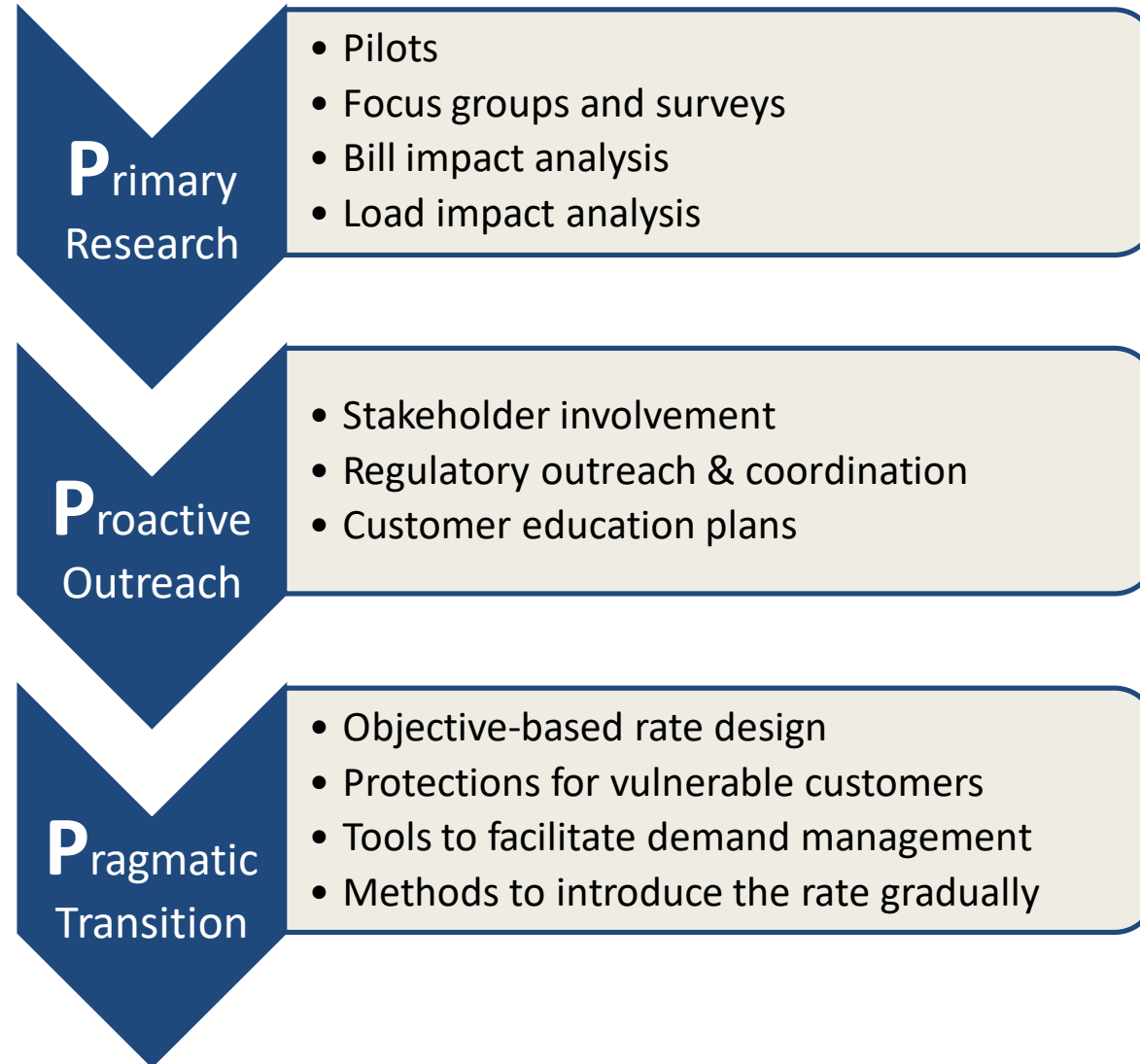
# Moving forward with tariff reform



# Moving forward with tariff reform



# Moving forward with tariff reform



# Main four tariff reform options in Brazil



## 1. Shift revenue collection to a **fixed** charge

**“Custo de Disponibilidade”**: 30 - 50 - 100 kWh - *Must be paid even without consumption.*

*Disadvantages:*

- *Higher incidence of taxes (ICMS) on a minimum bill with consumption lower than that billed,*
- *It do not correct the current cross-subsidies in the recovery of responsibility in the use of the system capacity, among customers with different load factors.*

## 2. Introduce **demand-based** charge

**“Tarifa Binômia”**: *In discussion - Current tariff are volumetric.*

- *Involves a very sensitive and comprehensive process that impacts about 90% of Brazilian customers.*

# Main four tariff reform options in Brazil



## 3. Make the volumetric charge **time-varying**

**“Tarifa Branca”**: *TOU tariff with 3 time-periods.*

- *Currently available for LV clients, with consumptions under 250 kWh/month.*
- *In 2020 would be available for all LV customers.*

## 4. Replace net energy metering with **net billing**

*Current Net Metering scheme is now in discussion to be replaced by a Net Billing approach.*

*Highlighting points of current scheme:*

- *Limit of 5MW.*
- *Allows:*
  - *exchange of energy credits between different units of a same client,*
  - *shared generation and*
  - *remote self-consumption.*

# Top discussions and stakeholder concerns in Brazil



## **“Demand charges as the new tariff design for LV customers”**

- Debate focused in meter replacement, but there are other options
- Smart meters mandatory for prosumers
- Raising concern on fixed charges to ensure fixed costs collection

## **“Deployment of TOU rate: (*Tarifa Branca*)”**

- Utilities concerns about the optional character of the tariff (adverse selection) and risks on revenues recovery
- Customer concerns about the “real” bill impact and its ability to modulate consumption

## **“Net Metering been replaced for Net Billing”**

- ANEEL presented several alternatives of Net Billing tariff’s design
- Stakeholder concerns are aligned to international experience
- Debate about considering GD just as another energy efficiency action



Thank you!