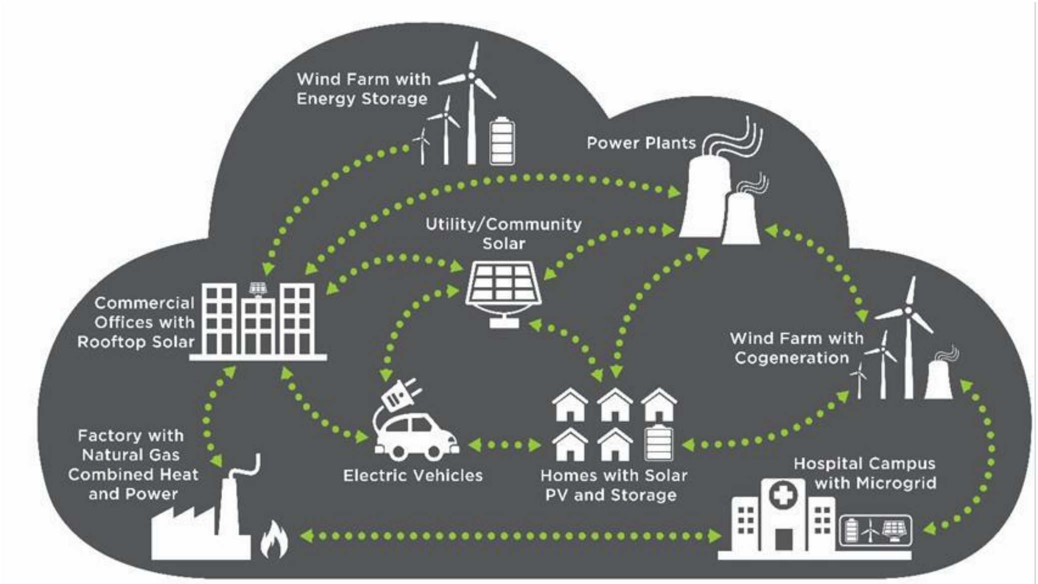
CALIFORNIA POTENTIAL AND GOALS

ROLE OF FINANCING IN POTENTIAL STUDIES

NAVIGANT ENERGY

We collaborate with utilities, government, investors, manufacturers, oil and gas companies, and major corporations to help them thrive in the rapidly changing energy environment.



The Energy Cloud

[1] *Navigating the Energy Transformation: Building a Competitive Advantage for Energy Cloud 2.0* (white paper)

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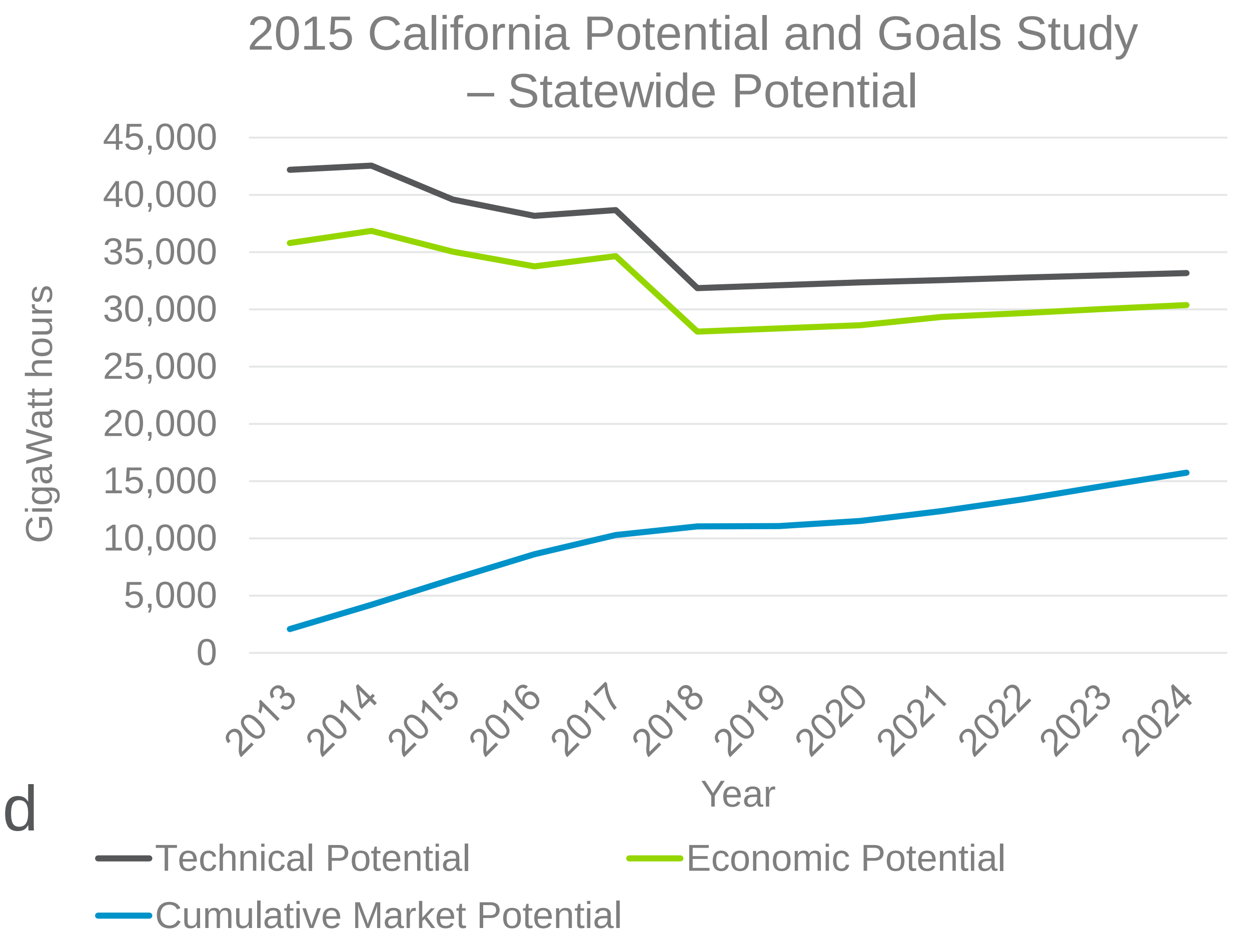
OUTLINE

- CA Potential & Goals Study
- Financing in CA Potential Studies
- Considerations

CALIFORNIA ENERGY EFFICIENCY POTENTIAL AND GOALS (PG) STUDY

- Statewide assessment of energy efficiency (EE) potential for IOU program.
- PG Model forecasts three levels of energy efficiency potential:
  - Technical
  - Economic
  - Market (achievable)
- Studies conducted for the CPUC in 2013, 2015, and 2017.
- Model uses a bottom-up approach tied to consumer choice (Bass diffusion)



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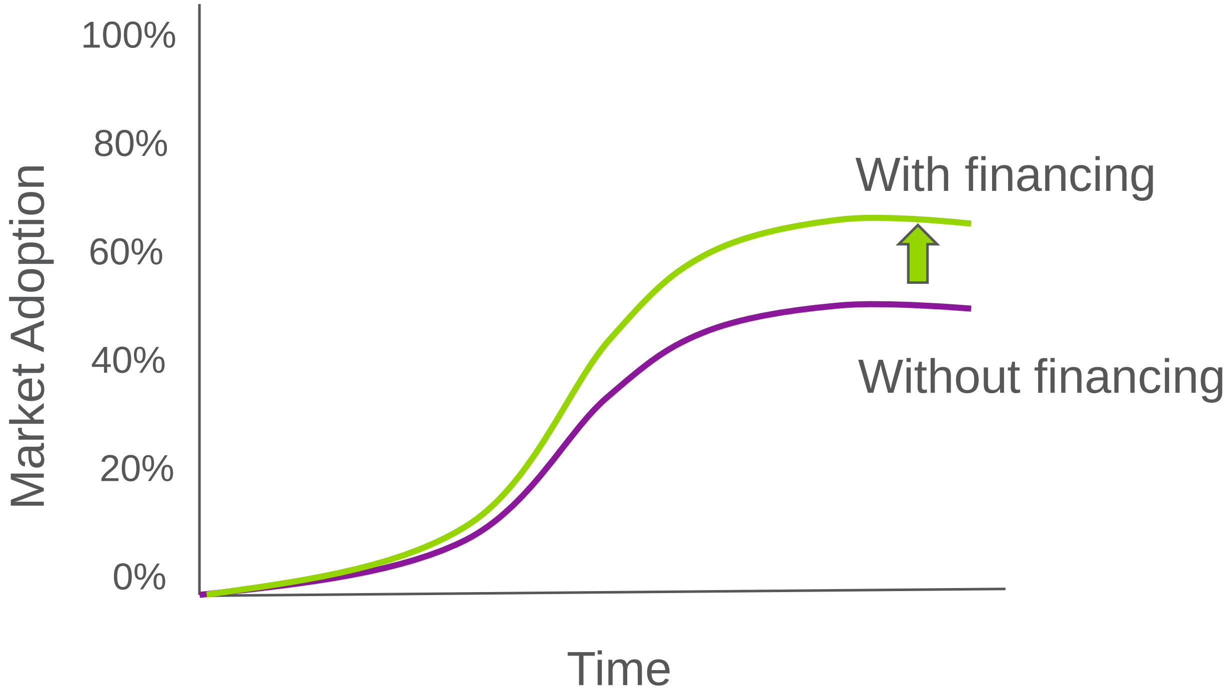
FINANCING IN THE PG STUDY

- The CPUC has recognized financing as an energy efficiency resource program.
- The PG model considers the impact of IOU programs.
- Navigant's approach in 2013 and 2015 considers financing as a mechanism influencing customer choices by reducing market barriers.



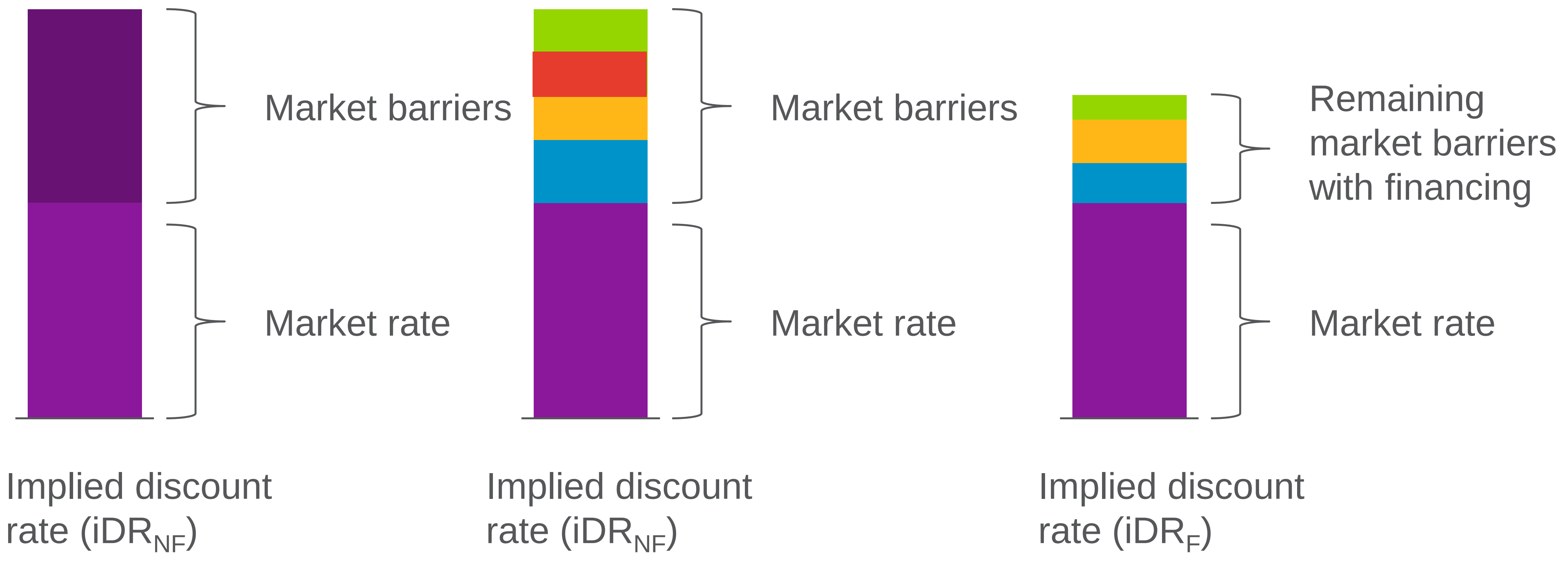
MARKET BARRIERS CAN SLOW TECHNOLOGY DIFFUSION.

- The effect of market barriers is reflected in the high consumer implied discount rate (iDR).
- The difference between the consumer implied discount rate and the market rate signifies the "efficiency gap."
- A high consumer iDR reduces value of future cash flow, lengthening the payback period of an investment compared to when the future is valued equally as the present.

Energy Efficiency Market Barriers
Lack of capital access
Hassle factor
Lack of information
Information search cost
Liquidity constraints
Split incentives
Savings uncertainty

FINANCING RATIONALE

The model considers financing as a mechanism influencing customer choices by reducing market barriers. EE financing is expected to reduce market barriers associated with first cost, split incentives, liquidity constraints, and savings uncertainty.



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2017 APPROACH

- Two scenarios:
  - Reference case
  - Aggressive case (includes financing)
- Lack of studies to calibrate the model's effect of financing
- Financing approach:
  - Modified cash flow that feeds into the customer willingness model
- The model only estimates the market potential for financing
- Results expected Summer 2017

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CONSIDERATIONS

Scope is limited to IOU programs.

Impact evaluations will provide important inputs to inform modeling decisions

Future opportunities to use iDR as a calibration factor

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CONTACT

NICOLE REED FRY
Managing Consultant
303.728.2526
nicole.reed.fry@Navigant.com