



ITEM C

San Diego Regional Airport Authority

STRATEGIC POWER STUDY

December 13, 2012

Presented by:

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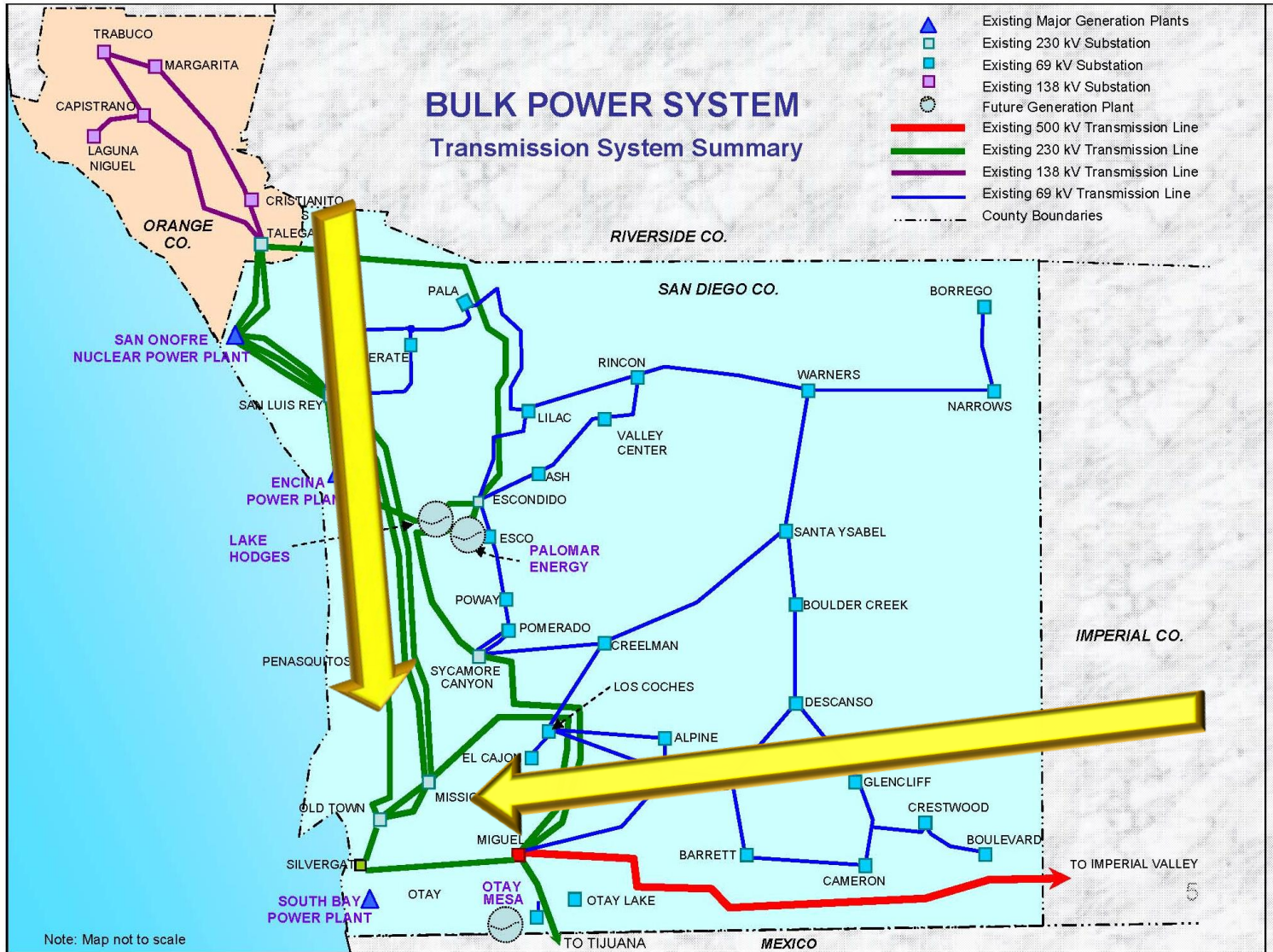
JACOBS

Agenda

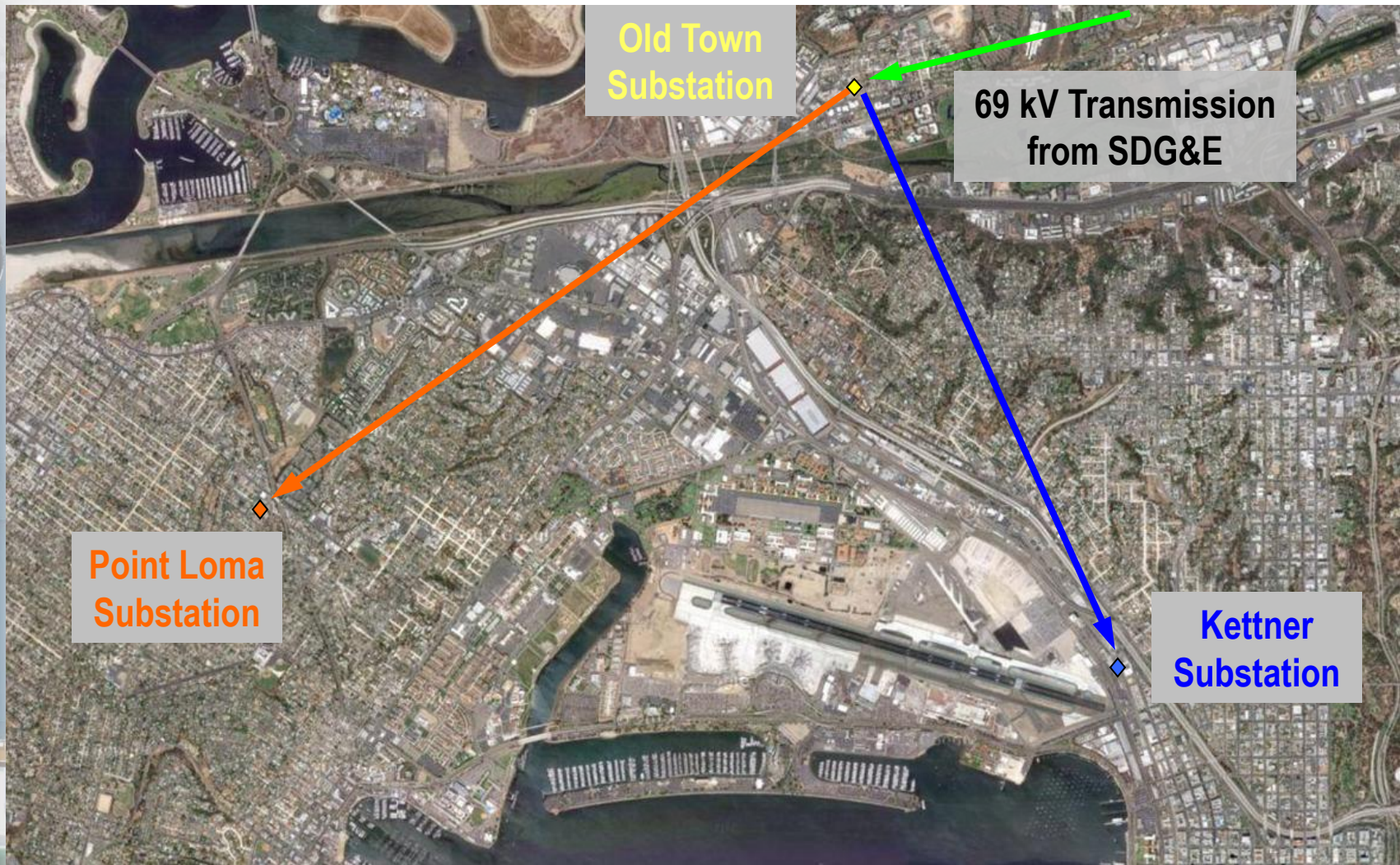
- Where SDIA Gets Power
- Current SDIA Energy Usage
- Future Strategy
- Backup Power
- Financial Summary



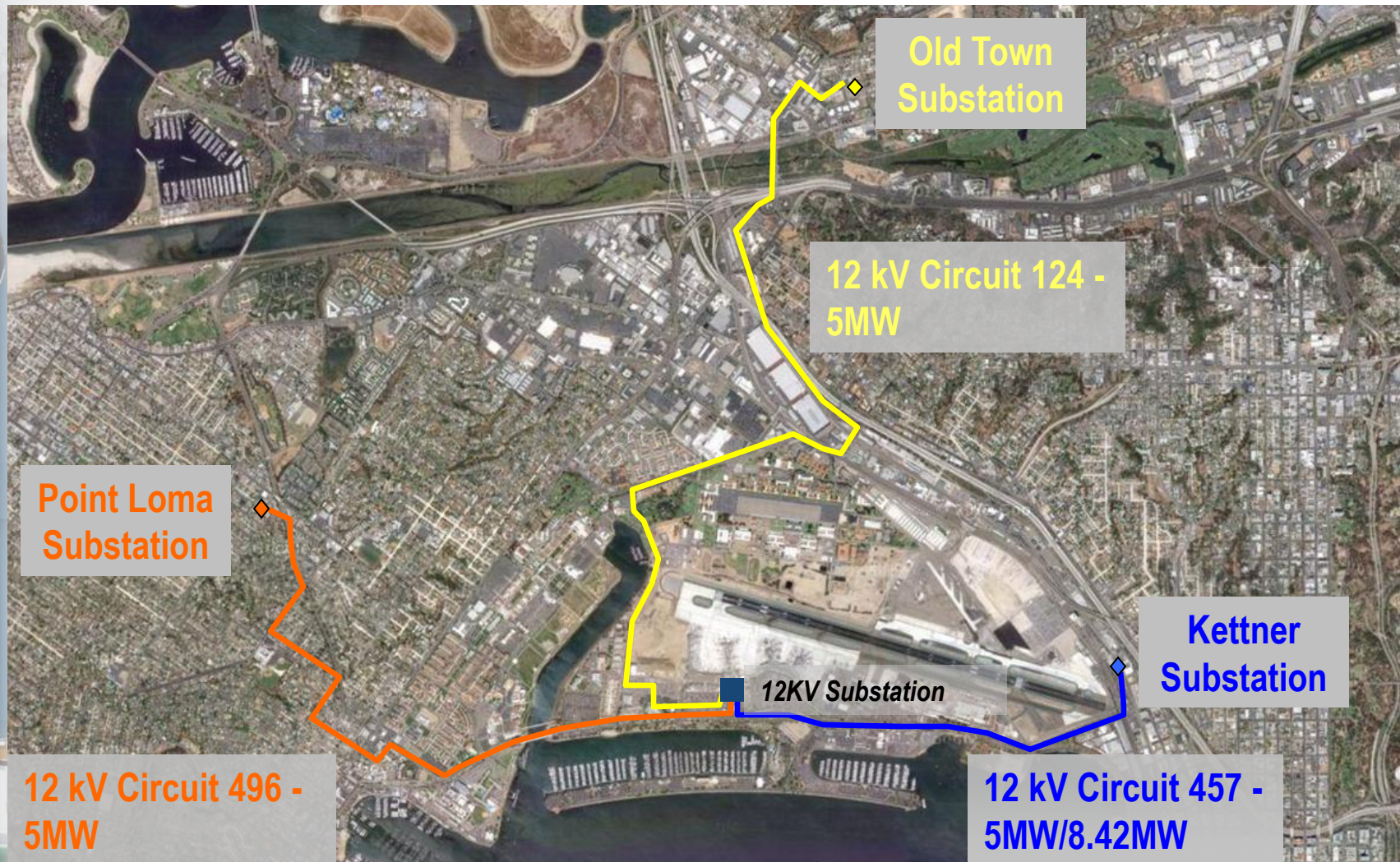
Power to the Airport



Power to the Airport



Power to the Airport



Power Inside the Airport

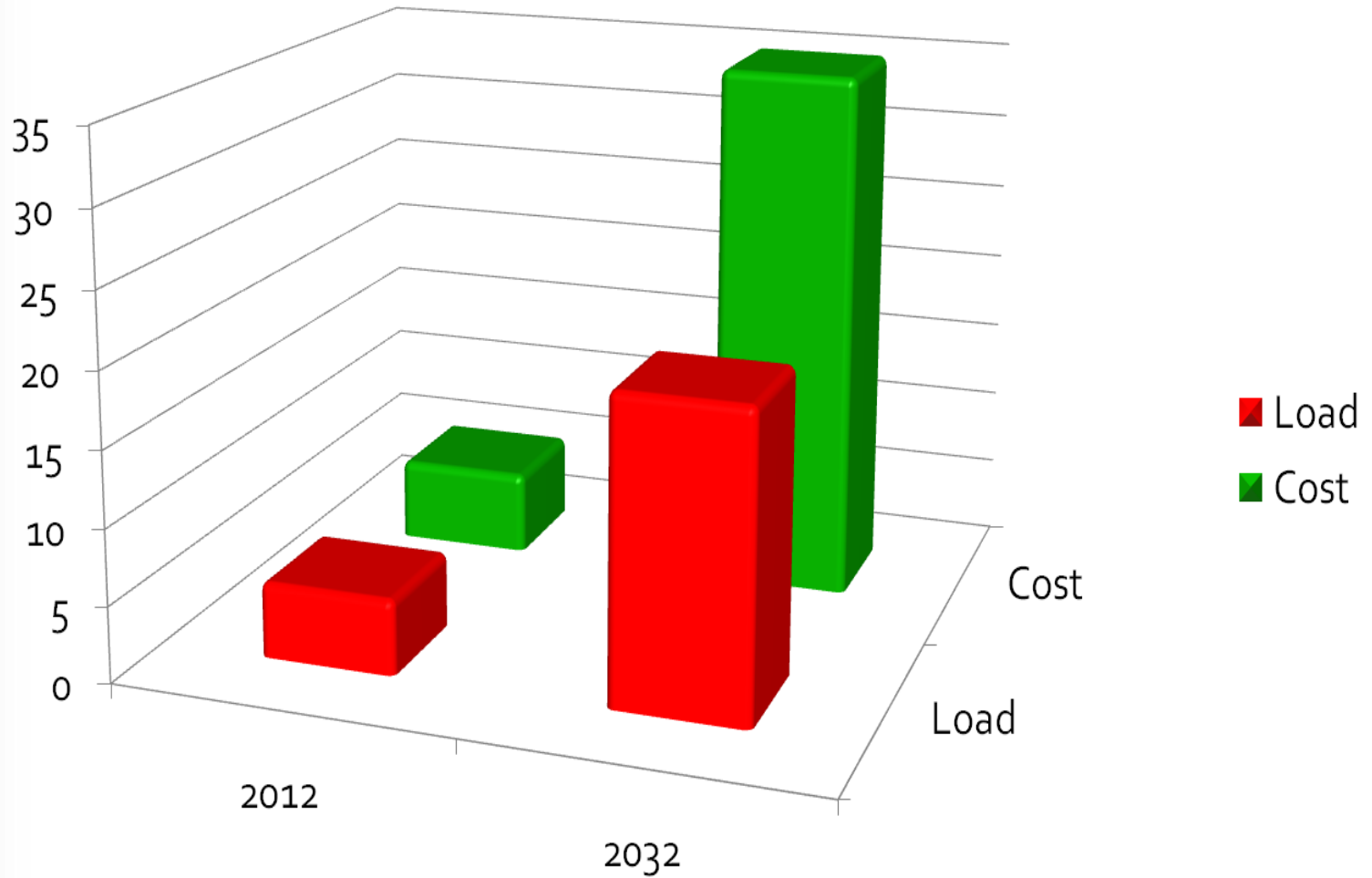


— 12kV Perimeter Loop

— T2 Loop

— T1 Loop

Usage and Cost Projections



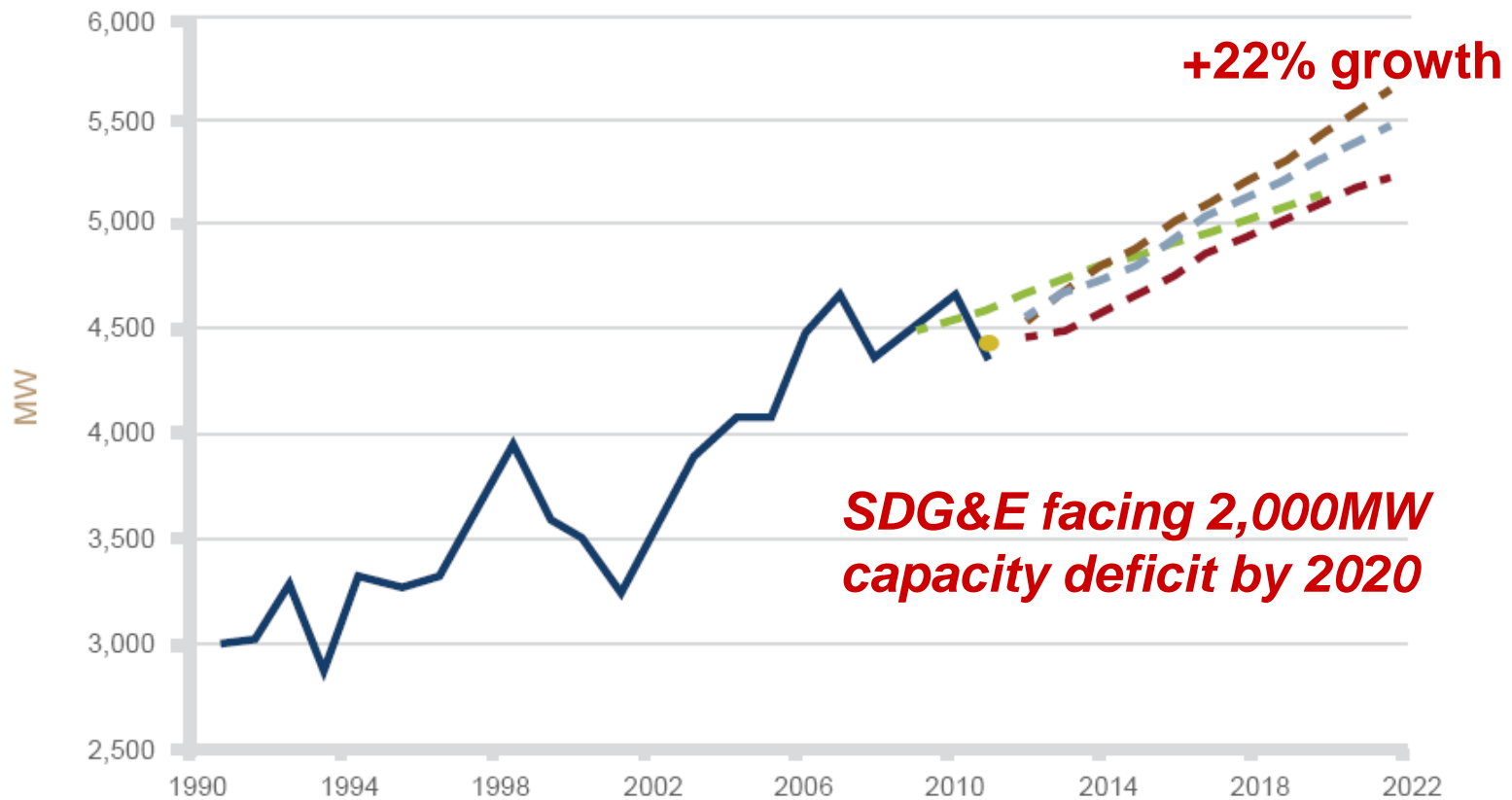
Power Study Scope

- Comprehensive evaluation of long-term Airport electricity service
- Cost effectiveness & reliability
- Considerations:
 - Airport goals & strategies
 - Airport Master Plan
 - Local electricity supply
 - Local and national market trends
 - Available strategic alternatives

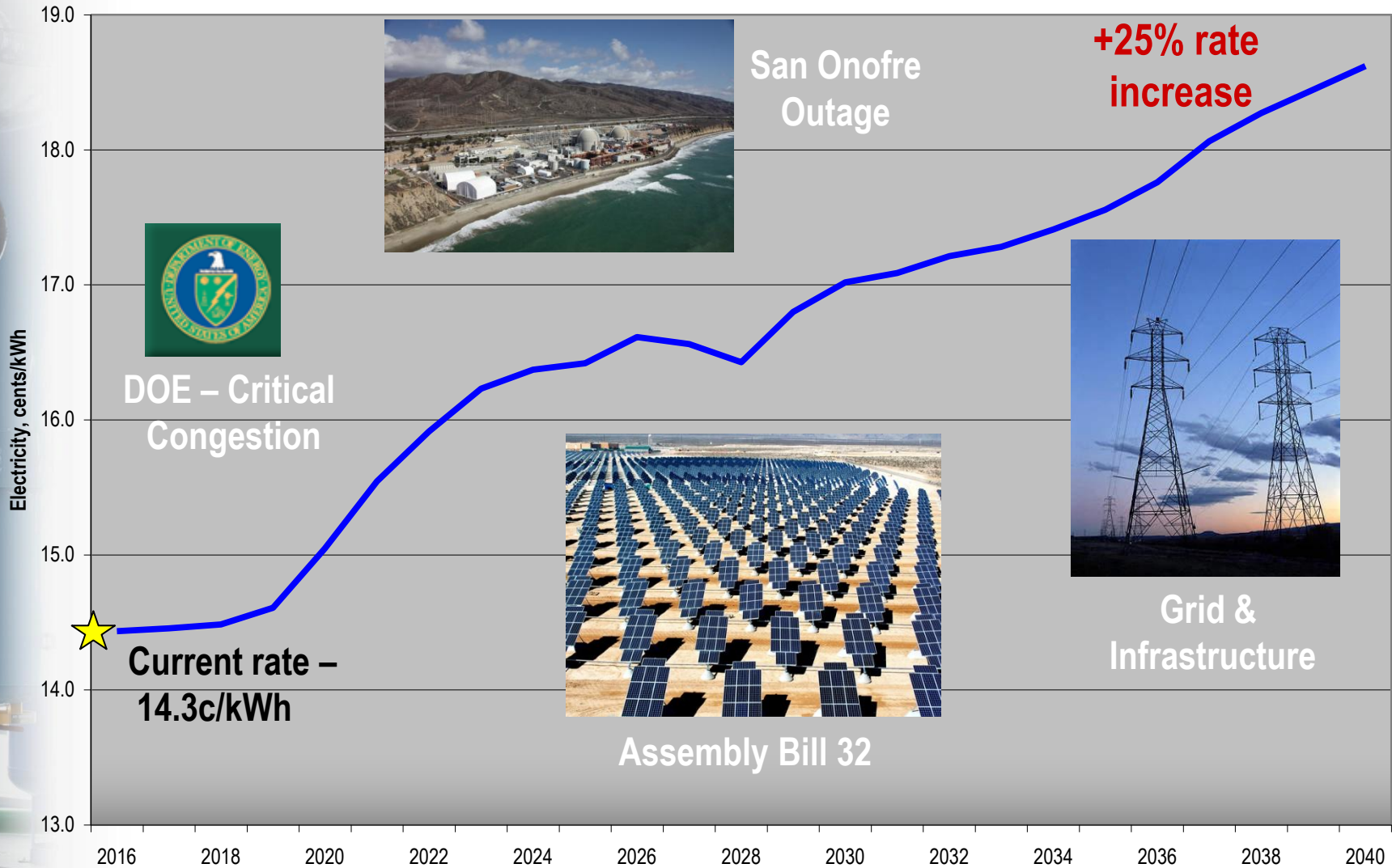


Energy Outlook

- San Diego County is a “Load Pocket”
- SDG&E Load Growth:

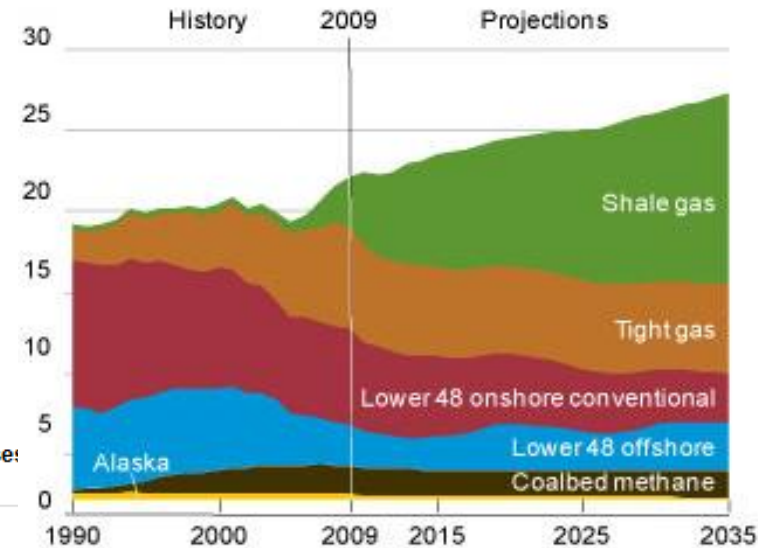


Energy Outlook

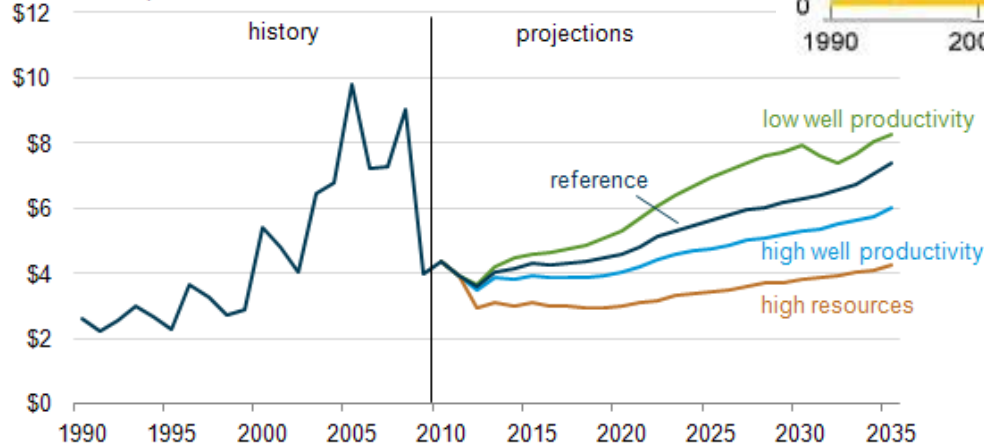


Energy Outlook

- Natural Gas = Optimal Fuel Source
- Outlook:
 - Prices at historic lows
 - Long term availability stable
 - Rates will increase over time



Henry Hub spot natural gas prices in four shale gas resources case:
2010 dollars per million Btu



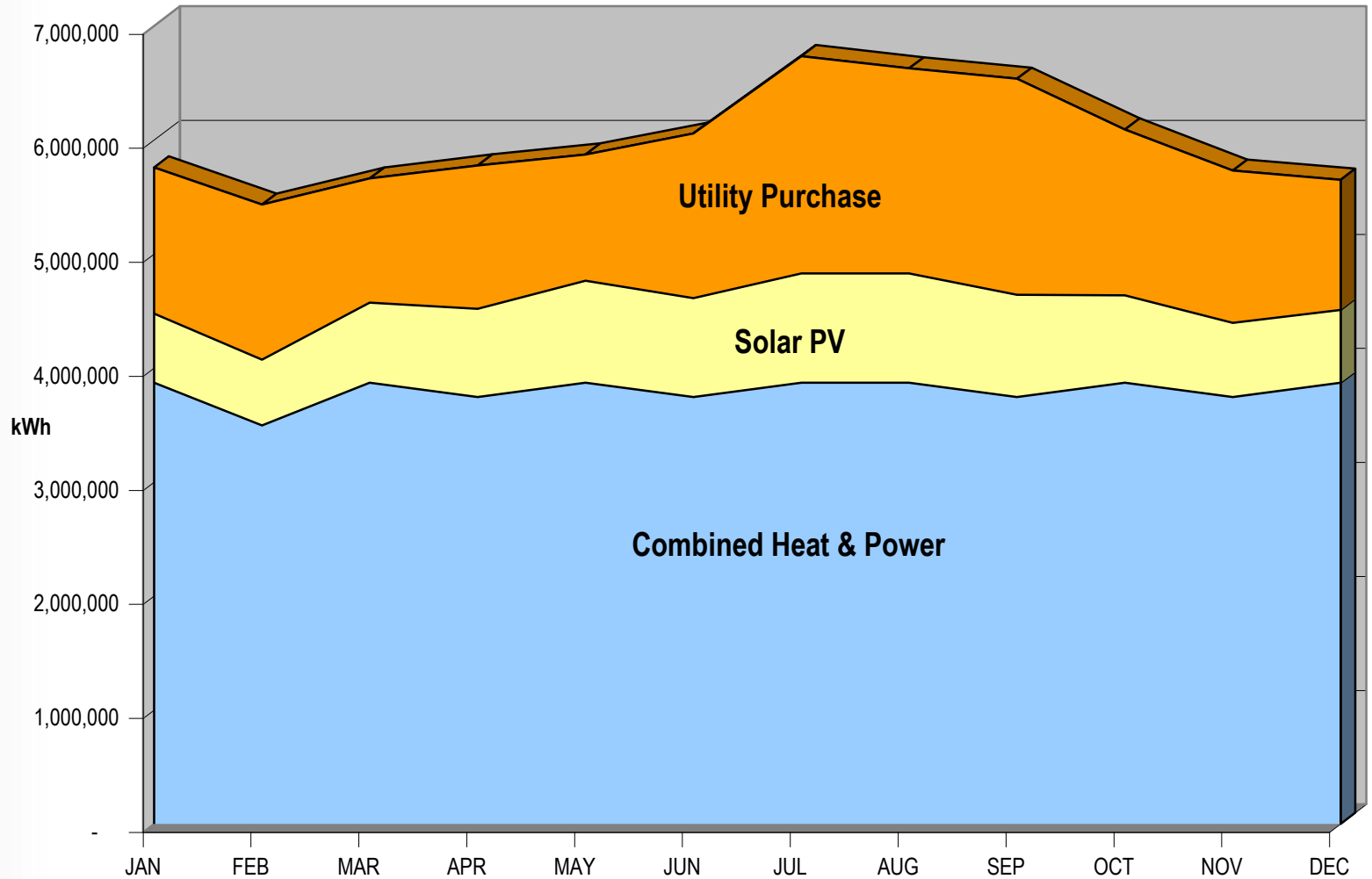
Power Study Findings

- Hybrid Energy Strategy
 - SDG&E
 - Solar
 - Self Generation



Hybrid Energy Strategy

2020 Sample Electricity Profile



Backup Power

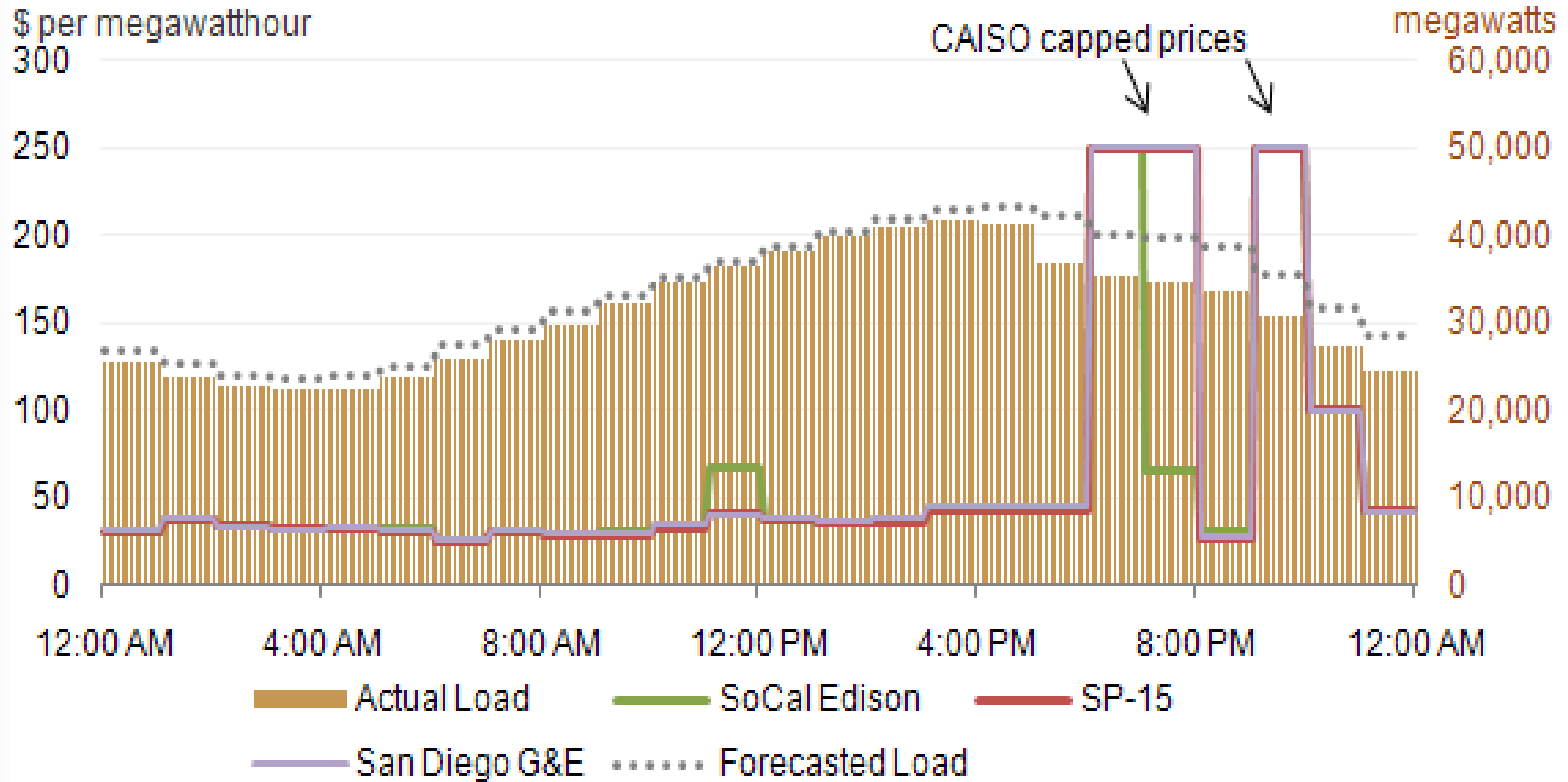
- Energy outlook demonstrates reliability concern
- CHP service can support critical Airport operations
 - Terminal 1: 1.6 MW
 - Terminal 2E: 1.6 MW
 - Terminal 2W: 5.0 MW
 - Commuter Terminal: 0.8 MW
 - Central Utility Plant: 1.0 MW
 - Total critical load: 10.1 MW
- On-site generating capacity: 10.4 MW



Risk Exposure

- Spot Market Pricing

Real-time prices and actual load for CAISO: Sept 8, 2011



Financial Summary

- \$ **251M** – Minimum energy obligation for next 25 years
- \$ **30M** – Minimum savings potential with CHP
- 10 year simple payback for on-site generation plant
- Factors affecting savings & ROI:
 - Departing load charges (SDG&E) - \$500K annual cost
 - Standby charges (SDG&E) - \$600K annual cost
 - Lost parking revenue (CUP expansion) - \$150K annual loss
 - Potential grants, incentives & rebates – TBD
 - Energy cost escalation (+/-)



Questions

