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Statewide Energy Efficiency Forum

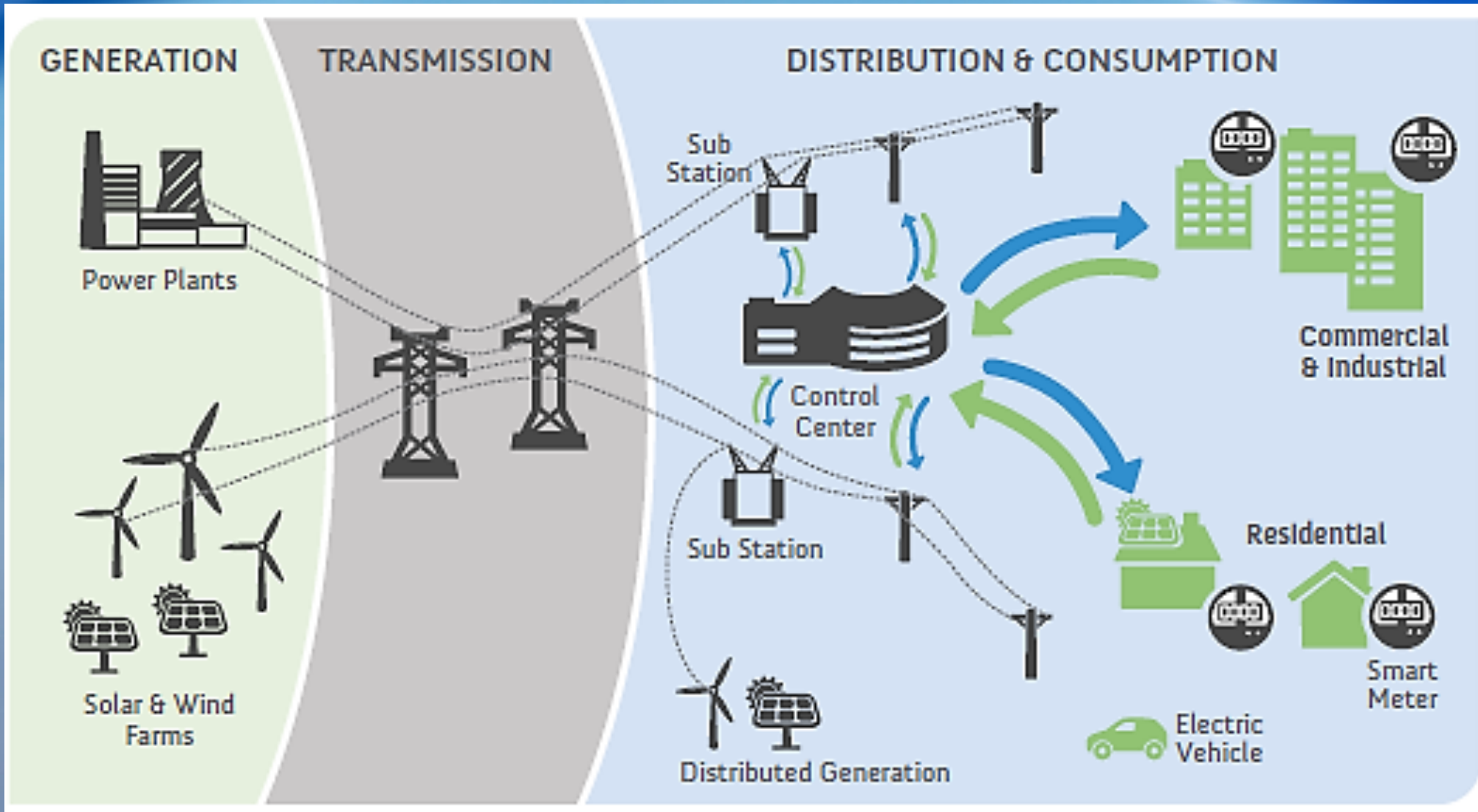
Ken Chawkins
Public Policy Manager
SoCalGas

Southern California Gas Company



- **Largest natural gas distribution utility in US**
- **Service territory of 20,000 square miles**
- **Serving 20.9 million consumers through 5.8 million meters in more than 500 communities**
- **Workforce of 8,500 employees**

Aging/Centralized electric grid transforming – Becoming modern and distributed “energy” grid while we are de-carbonizing energy supply



Grid Complexity Requires....

- Modern technology to adapt to consumer preferences
- Flexible and dynamic infrastructure
- Adjusted customer behaviors
- Market incentives balanced with environmental policy
- Predictable and balanced public policy

Federal/State Policy Strongly Support CHP



- CARB CHP Target from AB 32 - 4,000 MW new CHP by 2020
- 2008 Scoping Plan and *Draft* 2014 Scoping Plan Update
6.7 MMT CO_{2e} CARB AB 32 Scoping Plan CHP Target
- Governor Brown's Jobs Plan - 6,500 MW of new CHP by 2030
- Southern California Reliability – CHP preferred resource for SONGS and once thru cooling
- CEC 2014 Integrated Energy Policy Report (IEPR) – CHP Prominent
- Obama's Executive Order 13624 – 40 GW new CHP by 2020
- CPUC Settlement Agreements (2010) – SCE, PG&E, SDG&E must procure a min. of 3,000 MW until 2015

Combined Heat and Power

- **Distributed Technology / Customer Site**
- **Create electricity with waste for thermal application (cooling)**
- **Different than Waste Heat and Power**
- **Currently used in US for Industrial/Commercial customers**
- **Micro CHP market growing fast – 75% of market in Asia**
- **Important part of balancing energy grid**

CHP Benefits – Part of the overall solution

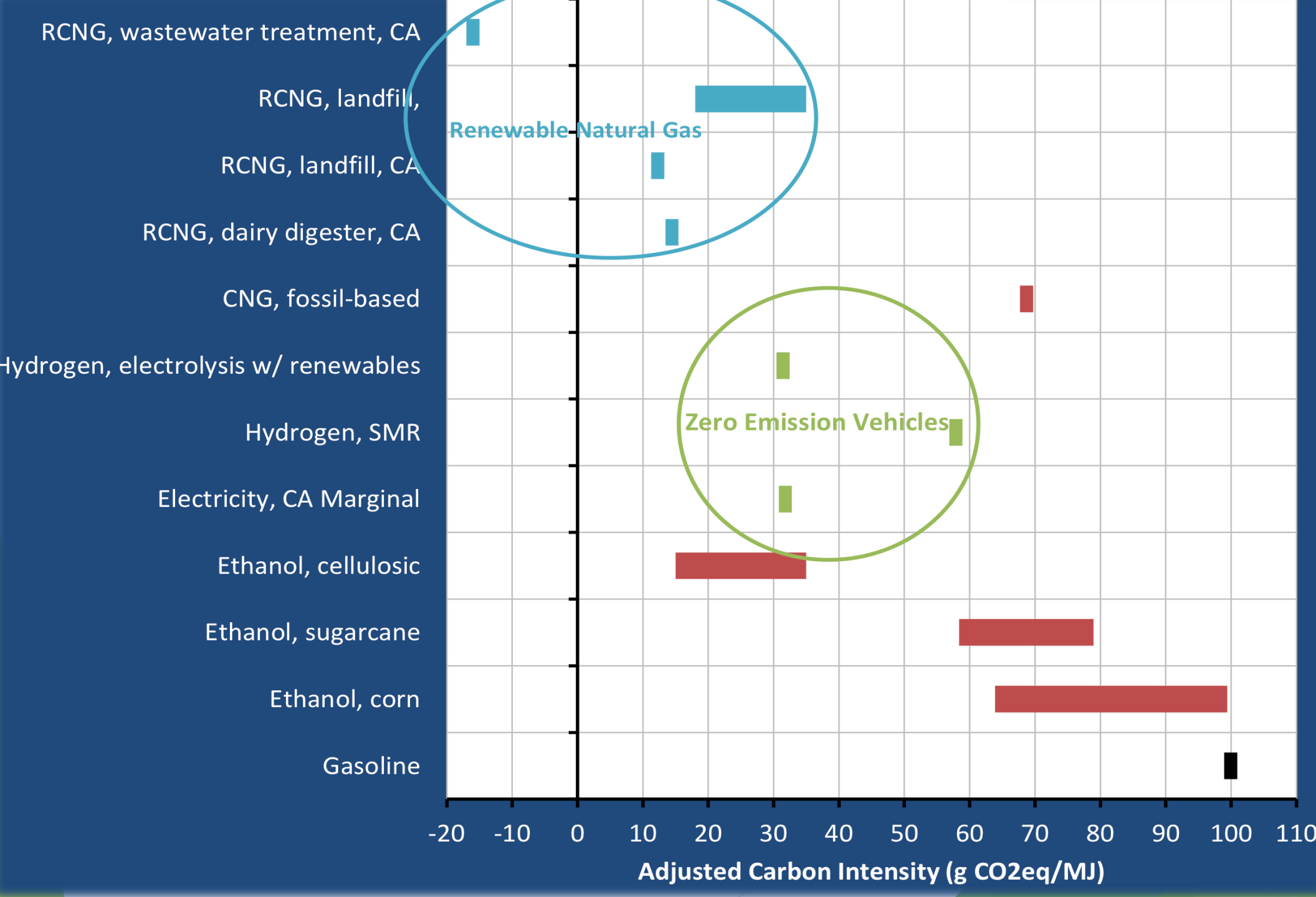
- **Environmental:**
 - Reduced GHG and polluting emissions
 - Reduced environmental footprint
 - Reduced peak demand
- **Customer**
 - Reduced customer energy costs
 - Local control of resource
 - Need rate structure to accommodate and protect “departing load” for electric utilities
- **Efficiency:**
 - High overall utilization efficiencies
 - Reduced operating costs
 - Local use – Limited transmission/distribution costs
- **Proven technologies commercially available that cover full range of sizes and applications**

Distributed Energy Resources (DER) Proposed Tariff

- » DER Tariff - filed with the California Public Utilities Commission on 08/08/14
- » Utility design, install, own, operate, and maintain distributed energy assets on or adjacent to customer premises. Optional tariff.
 - Flexible financing
 - Customer responsible for natural gas and electricity commodities
 - Primary CHP targeted customer segment = base load of 1 to 20 MW
- » Applications:
 - Combined Heat and Power (CHP)
 - Waste Heat to Power
 - Mechanical Drives
 - Fuel Cells
- » Pricing: Customer pays a monthly market-based service fee
 - SoCalGas ratepayers bear no risk under the tariff
- » Term: The DER contract term is negotiable and is expected to range from 10 to 20 years

Biogas

- **Renewable Natural Gas/Biogas will help lower the greenhouse gas profile of all natural gas uses**
 - **Agricultural waste**
 - **Wastewater treatment facilities**
 - **Landfills**
- **Offering Biogas Conditioning Services Tariff to facilitate development of renewable natural gas market by providing a means to clean biogas so it can be injected into our pipelines**



Renewable Natural Gas

Zero Emission Vehicles

-20 -10 0 10 20 30 40 50 60 70 80 90 100 110

Adjusted Carbon Intensity (g CO₂eq/MJ)

SoCalGas Biogas Conditioning/Upgrading Services (BCS) Tariff



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- **BCS Tariff** - allows SoCalGas to design, install, own, operate & maintain biogas conditioning/upgrading equipment on or adjacent to the customers premises
 - SoCalGas will not own the biogas – Just the equipment
 - Customer must pay for all costs associated with the interconnection facilities
 - Optional tariff – Competitively neutral
- **Pricing** - BCS Tariff rate charged to customer covers both CapEx and O&M
 - Ratepayers bear no risk under the BCS Tariff
- **Term:** BCS contract term is negotiable and is expected to range from 10 to 15 years

Review / Utility Role Distributed Resources



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- **Complicated energy grid of the future**
- **Necessary to have “all of the above” strategy**
 - **Technology and fuel**
- **Reliability and affordability as important as Environmental**
- **NG technologies like CHP and Tariffs can help**
- **Municipal application must use all tools available**



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QUESTIONS/COMMENTS