



Item 11: Cost Share for Federal Funding Opportunities Industrial Decarbonization and Improvement of Grid Operations (INDIGO) Program and Food Production Investment Program (FPIP) – GFO-22-902

September, 11th 2024 Business Meeting

Kevin Mori, Mechanical Engineer
Industrial, Agriculture & Water Industrial Decarbonization
Energy Research and Development



Benefits to Californians

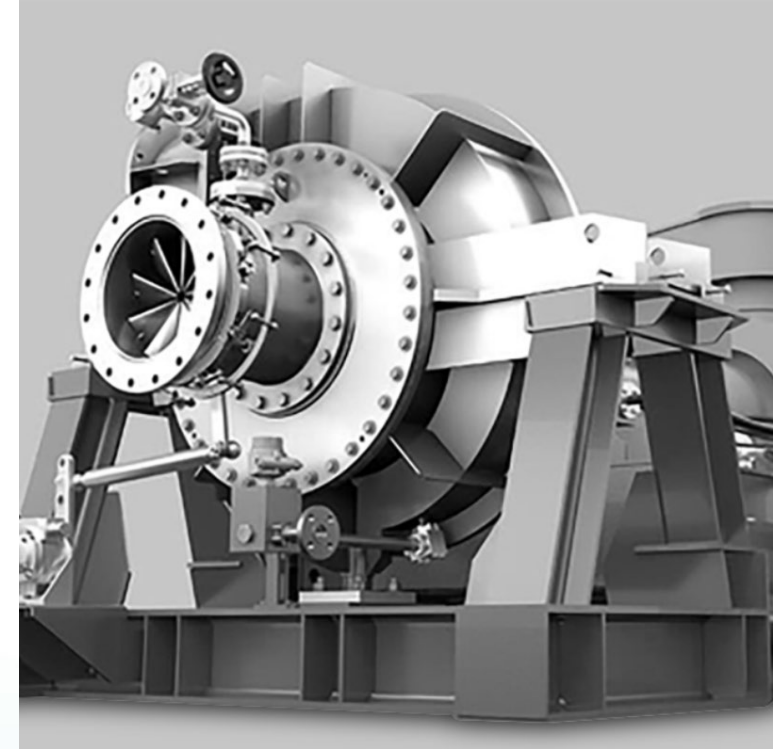
- \$10M in CEC grant funds will leverage \$90M in federal funding
- Electrification of industrial processes
- Reduce fossil fuel/gas use by industrial facilities
- Increase load flexibility in the industrial sector
- Projects located in priority populations

Awardee	CEC Funding	DOE Funding	Other Match
Skyven Technologies	\$5M	\$15M	\$10.4M
Gallo Glass Company	\$5M	\$75M	\$70M



Item 11.a Skyven

- Industrial steam generating heat pump
- Converts low-grade waste heat into high-temperature steam through mechanical vapor recompression
- 33,533 MT CO₂e reduced annually
- 10 MW of grid demand response
- Pulp and paper facility in Oxnard



Source: Skyven Technologies



Item 11.b Gallo Glass

- Hybrid electric glass furnace
- Converts from 90% fossil gas + 10% electricity to 20% fossil gas + 80% electricity
- 41,500 MT CO₂e reduced annually
- Glass facility in Modesto



Source: SORG



Technology Potential

If all glass and paper companies in California adopted these technologies

Steam Generating Heat Pump

- Replicable at Chemicals and Food & Beverage industries
- Potential for 8.5 million MT CO₂e statewide reduction

Hybrid Electric Glass Furnace

- California glass industry produces over 400,000 MT CO₂e annually from fuel combustion
- Potential for 50% reduction of GHG emissions industry wide



Staff Recommendation

- Adopt staff's determination that these projects are exempt from CEQA
- Approve grant agreements