

STRATEGIC ENERGY PLAN FOR SANTA BARBARA COUNTY

Presentation to the County Board of Supervisors
September 10, 2019



Agenda

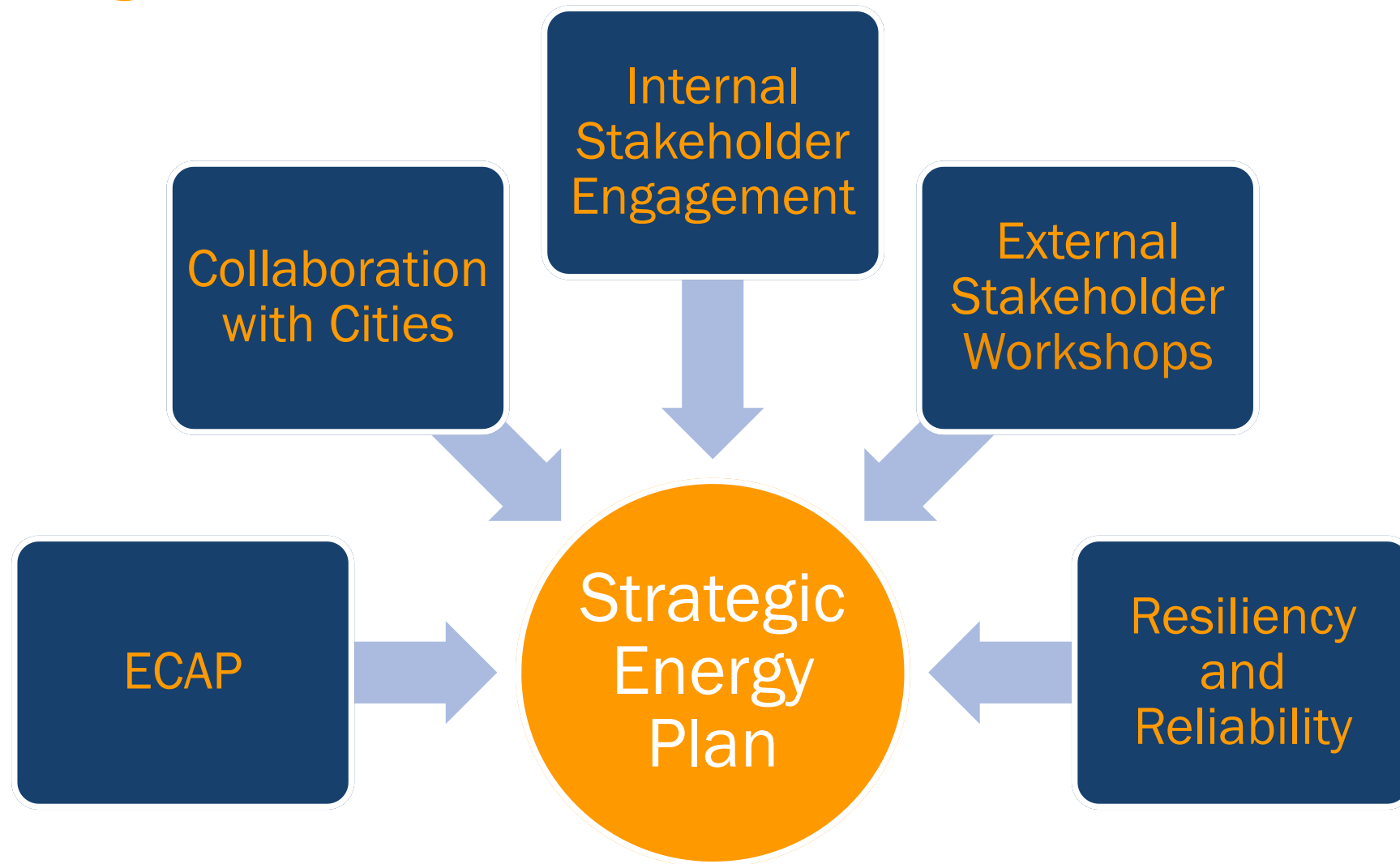
- Project Objectives
- Background and Overview
- Phased Development
- Recommended Actions

Project Objectives





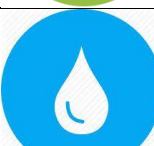

The background of the slide is a faded, light-colored photograph of the Santa Barbara Mission. The central focus is the mission's clock tower, which is a multi-story structure with a balcony on top. The mission building itself is a large, white, Spanish Colonial-style building with arched windows and a tiled roof. The scene is set in a lush, green landscape with many palm trees and other tropical plants. The sky is a clear, light blue.

- Renewable energy resource potential in Santa Barbara County
- Individual site analyses
- Barriers to renewable energy development
- Recommended actions to overcome barriers

Background



Renewable Energy Potential

Renewable Resource	Generation Capacity (MW)	Annual Generation (GWh)	Households Powered (approximate)
 Solar PV	1,251 – 1,857	1,700 – 2,925	595,000 – 1,023,000
 Biomass	44 – 78	249 – 375	87,000 – 131,000
 Wind	21 – 42	45 – 129	15,500 – 45,000
 Biogas	3 – 7	13 – 20	4,500 – 7,000
 Hydro	3 – 6	6 – 16	2,100 – 5,600
 Geothermal	1 – 2	7 – 13	2,400 – 4,500

Urban Solar Potential

- Primarily rooftops and carports
- Wholesale vs. On-Site Use
- Residential, Commercial, Mixed-Use
- Considerations: load, rooftop availability, shading, structural and geotechnical concerns, etc.

Area	City or Jurisdiction	Rooftop Annual Generation (GWh)	Parking Lot Annual Generation (GWh)	Total Urban Annual Generation (GWh)
Unincorporated County	Orcutt	119 - 164	1 - 4	120 - 168
	Isla Vista (non-UCSB)	12 - 16	1 - 4	13 - 20
	Other Unincorporated	162 - 223	14 - 22	176 - 245
Participating Cities	Goleta	107 - 155	30 - 38	137 - 193
	Carpinteria	42 - 57	9 - 12	51 - 68
Non-Participating Cities		713 - 985	218 - 270	931 - 1,255
Total		1,155 - 1,600	273 - 350	1,430 - 1,950

Agricultural Solar Potential

- Primarily utility-scale ground mount
- Wholesale vs. On-Site Use
- Considerations: load, land availability, topography, regulatory and environmental concerns, proximity to transmission grid, etc.

Area	Land Type	Generation Capacity (MW)	Annual Generation (GWh)
North County	Williamson Act	34 – 102	48 - 194
	Non-Williamson Act	154 – 399	215 - 758
South County	Williamson Act	0 – 2	0 – 4
	Non-Williamson Act	5 – 10	7 - 19
Total		193 – 513	270 - 975

Individual Site Analyses

Site Name	Site Type	Interconnect	System Size (kW)	Energy Output (MWh/year)
Santa Maria Mental Health Building	Roof/Carport	Behind meter	161	258
Northern Branch Jail	Roof/Carport	Behind meter	1,120	1,813
Northern Branch Jail	Ground Mount	Front of meter	4,450	7,895
Fire Station 11	Roof	Behind meter	30	40
TOTAL COUNTY SITES			5,761	10,006

- 15 Private Sites have an estimated combined generation of 123 GWh/year. Enough to power about 42,000 homes.

Barriers and Recommendations

1. County Institutional
2. Regulatory
3. Utility and Infrastructure
4. Education and Public Awareness
5. Financial and Funding

Phase One

Barrier Type	Barrier	Recommended Action	Timeline	Responsible Department	Estimated Costs
County Institutional	Lack of formal plan for power outages	Create an Energy Assurance Plan	12-24 months	Sustainability Division, OEM, General Services	\$250,000 - \$350,000
Regulatory	Utility-scale solar projects limited to Cuyama Valley	Develop Utility-Scale Solar Ordinance	12-18 months	Planning & Development, Sustainability Division	\$300,000 - \$350,000*
Regulatory	Ag land enrolled in Williamson Act constrains use for utility-scale solar	Update Uniform Rules for Ag Preserves	12-18 months	Planning & Development, Sustainability Division	P&D to develop estimate, if tasked

*Planning & Development work program and budget currently only includes development of a Utility-Scale Solar Ordinance.

Phase Two

Barrier Type	Barrier	Recommended Action	Timeline	Responsible Department	Estimated Costs
Regulatory	Utility-scale renewables prohibited in coastal areas	Update Coastal Zoning Ordinance to allow wind energy systems	24-30 months	Planning & Development, Sustainability Division	P&D to develop estimate, if tasked
Regulatory	Lack of standardized solar + storage permitting criteria	Establish best practices for solar + storage permitting procedures	24-30 months	Planning & Development, Sustainability Division	P&D to develop estimate, if tasked
Education & Public Awareness	Lack of public awareness of cost/benefits of renewables	Create a One-Stop-Shop education center, conduct outreach to businesses and ag landowners	12-18 months	Sustainability Division	\$50,000 - \$75,000
Utility & Infrastructure	Two separate, unintegrated utilities	Pursue a community solar project	24-36 months	Sustainability Division	\$150,000 - \$200,000*

*Estimated costs do not include project construction costs.

Phase Three

Barrier Type	Barrier	Recommended Action	Timeline	Responsible Department	Estimated Costs
Financial and Funding	Lack of financing for renewable projects	Create loan-loss reserve fund	18-24 months	Sustainability Division	\$110,000 - \$140,000
Financial and Funding	Change in electricity rates, elimination of ITC	Provide financial incentives	36+ months	Sustainability Division	\$175,000 - \$195,000

- Estimated costs only include staff time and consultant costs. Loan loss reserve funds, and incentive funds are not included.

Staff SEP Recommendations

- Phase 1 Recommended Actions
 - *Develop an Energy Assurance Plan*
 - *Create a Utility-Scale Solar Ordinance*
 - *Update the Uniform Rules for Agricultural Preserves*
- \$650,000 in CCE fund balance
- P&D budget only includes development of utility-scale solar ordinance. Additional funds required for other tasks assigned.
- Revenue Raising Strategies from the SEP
 - *Utility tax*
 - *Sales tax increase*

Expected Outcomes

- Greater reliability and resiliency at critical facilities
- Increased development of distributed and utility-scale solar
- Creation of local renewable energy jobs

Recommended Actions

- Consider and adopt the Strategic Energy Plan (SEP) for the County of Santa Barbara
- Direct staff to pursue development of the recommended actions described in the SEP, and return to the Board as needed for further direction or approval prior to implementation
- Determine that the recommended actions do not constitute a project subject to environmental review under the California Environmental Quality Act (CEQA)

QUESTIONS?
