



ARAPAHOE COUNTY





ARAPAHOE COUNTY

Arapahoe County Solar PV Opportunity

June 8, 2026

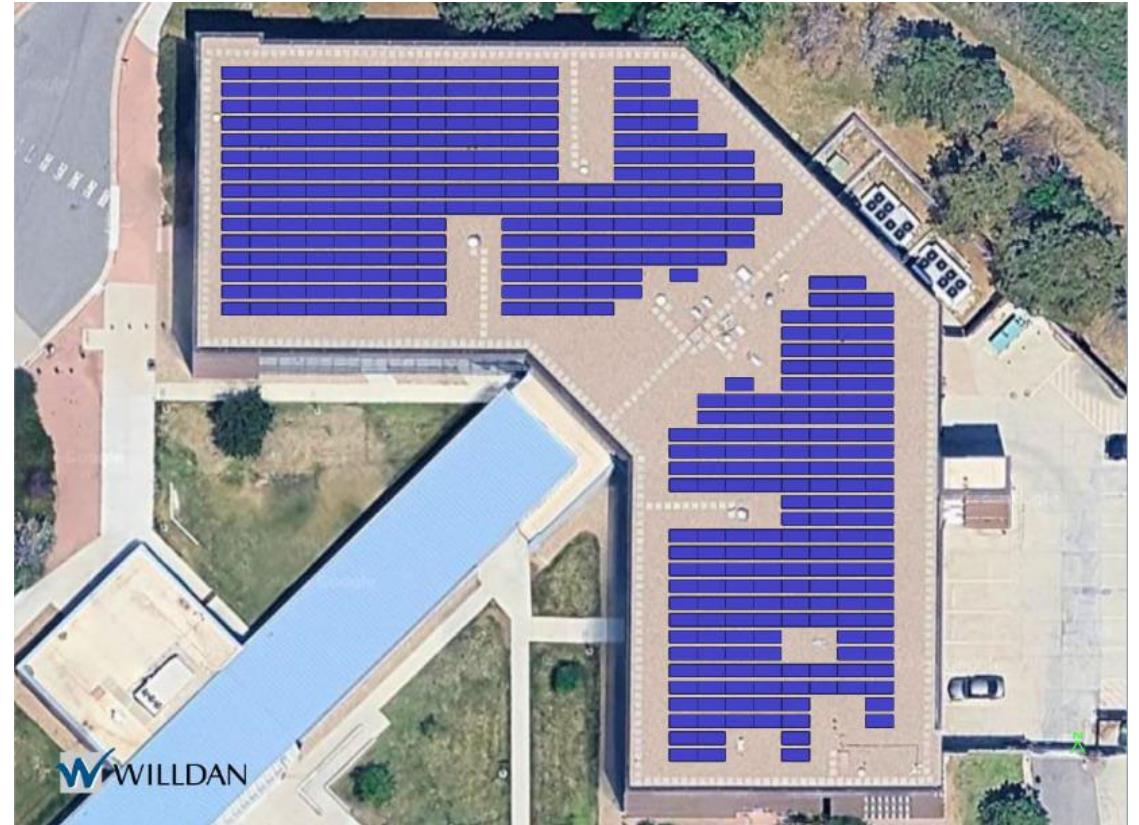


Purpose of Today's Presentation

- ✓ Present evaluation of rooftop solar opportunity at County facilities
 - ✓ Review feasibility, costs, benefits, and implementation considerations
 - ✓ Request Board direction to advance initial investment and continue project feasibility
-

The Opportunity

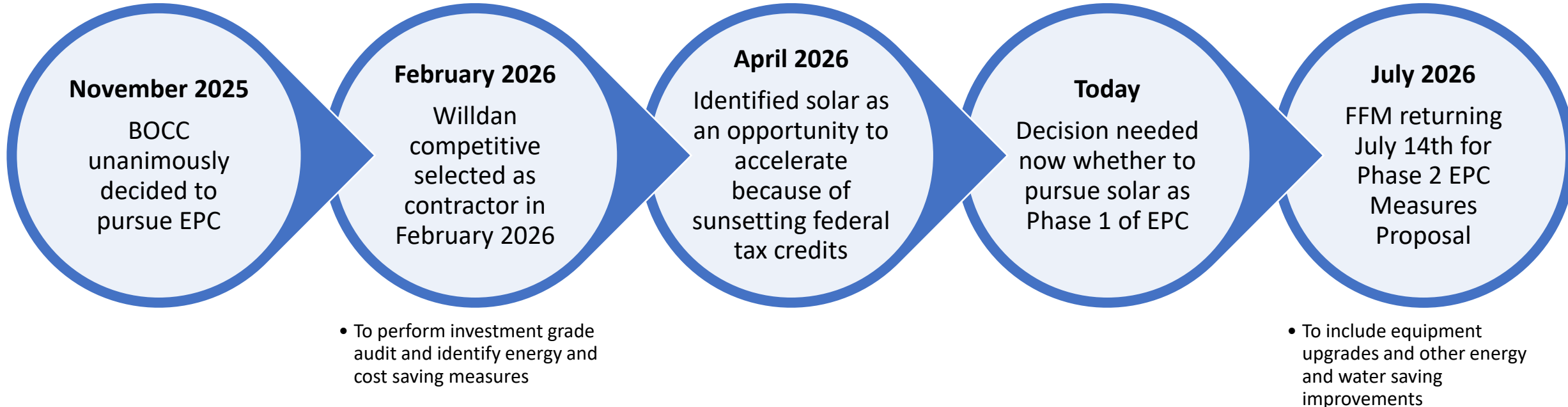
- Install Rooftop Solar Photovoltaic (PV) Systems on up to 6 County facilities
- Estimated Total Cost: \$5 Million
- Savings: \$5-10 million over 30 year equipment lifespan
- July 3rd deadline to access \$2 million federal tax credit
 - Requires 5% material investment



Phase 1 of Energy Performance Contract (EPC)

Energy Performance Contract (EPC)

A **financing & contracting** tool that allows Public entities to use future savings from energy improvements to fund capital projects



Willdan will serve as contractor for entirety of project



Investment Tax Credit – Incentive Deadline

- **Section 48E Clean Energy Investment Tax Credit (ITC)**
 - Governments can receive ITC as Direct Payment
 - 30% of total project cost
 - Additional 10% for ‘Clean Energy Community’ designation
- *Solar PV must commence construction* by July 4th, 2026 to qualify
 - 5% materials purchase (‘safe harbor method’) meets requirement



Current Solar Investments

Offsite Solar Purchase Program

- Community garden solar credits offset ~20% of total facility electricity
 - Centrepont and Sheriff/Coroner electricity bills*
- \$46,000 in Xcel Credits (bill savings) since 2018
 - Some years payments are higher (no savings)

- ✓ Strategic Energy Mgmt
- ✓ Equipment Upgrades
- ✓ Offsite Solar



Electricity



30%



Facility GHG Emissions



38%

Since 2016

Community Solar Garden



Facilities located in
Watkins and Aurora, CO

*Can be transferred to other sites/meters



Why Add On-Site Solar Now?



Reduce County energy costs



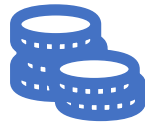
Improve long-term budget predictability



Lower greenhouse gas emissions



Advance County sustainability efforts



Capture time-sensitive federal incentives



Strategic Plan Alignment

- ✓ **County Mission:** We deliver exceptional County services and use resources responsibly to advance quality of life.
- ✓ **Decision-Making Considerations:** Lens of Sustainability
- ✓ **Focus Area: Sustainable Growth and Infrastructure**
 - ✓ Prioritize capital improvement projects (CIP) including deferred maintenance.
 - ✓ Support environmentally responsible development and energy efficiency in county operations.



Sites and Impact

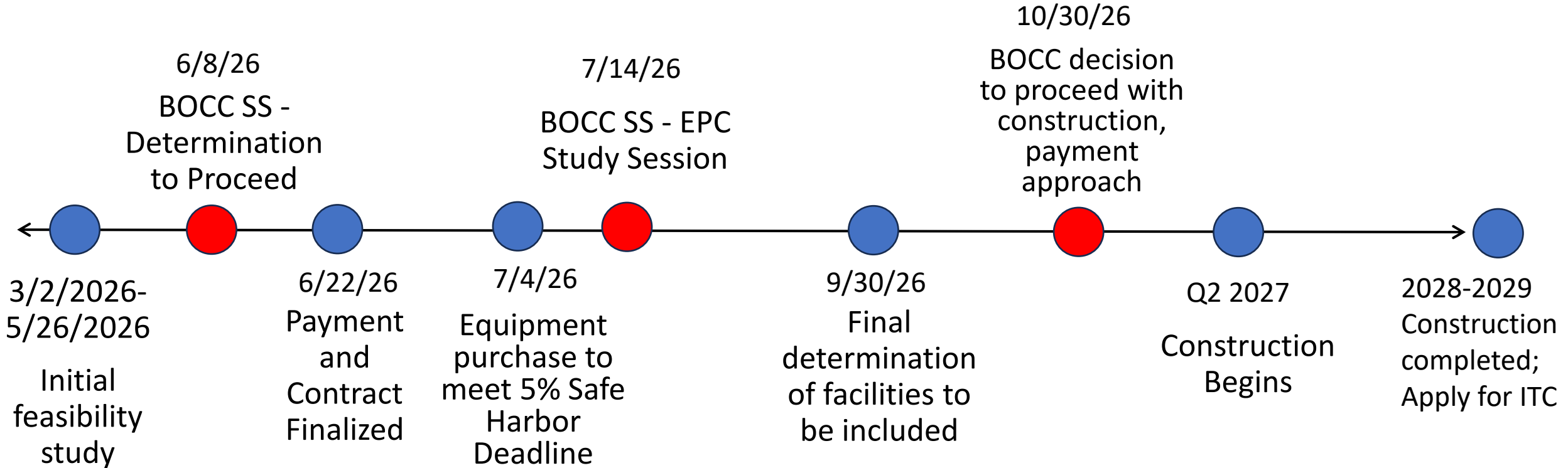
- Proposed solar generation represents:
 - 16% of total county facility electricity usage
 - 14% total electricity costs
 - 20% more reduction in total county facility CO2 emissions

Building Name	Total PV System Size (kWdc)	Est Yr1 Annual kWh Production (kWh)
Admin I	139.08	199,695
ACJC Courthouse I	225.09	348,878
ACJC Courthouse 2	250.71	385,722
Centrepont Plaza	126.27	177,607
Sheriff/Coroner	283.04	436,523
Fairgrounds	301.34	423,600
Totals	1,325.53	1,972,025

These 6 buildings were selected for having the largest generation and payback potential, and for their likelihood to be used by the County long-term



Solar Project Timeline



Costs and Benefits

	No Financing	Financed
Total Project Costs	\$4,920,919	\$4,920,919
Advanced payment for Material Procurement	\$393,674	\$393,674
ITC Tax Credit	\$1,968,368	\$1,673,112
Energy Savings*	\$11,178,378	\$11,178,378
O&M Costs*	(\$2,181,187)	(2,181,187)
Financing Rate (20 year term)	-	4.25%
Cumulative Savings	\$10,502,040	\$3,691,268

Assumptions

- Conservative 2.4% energy escalation rate
- Xcel Solar* Rewards credit
- 40% ITC Tax Credit
- 30 Project Year Lifespan
- Minor increase in ongoing O&M Costs

Board may elect to finance or use one-time funding

- Decision required when final project defined
- O&M costs may be included in financing

*Cumulative totals are based on projected annual costs and savings, which may vary by month and year

*O&M Costs include routine maintenance and planned equipment replacements

Risk Analysis

Risk	Likelihood	Impact	Mitigation
Project stoppage after initial approval (for any reason)	Medium	Loss of restocking fees and other charges related to 5% purchase down payment	Pre-negotiate restocking option, or pursue smaller solar project
Building or equipment decommissioned before 30 years	Medium	Will not realize full savings potential	Ensure placement on long-hold facilities, integrate into master planning
Unexpected changes in electricity or O&M costs	Medium	Reduced overall savings	Plan to conservative estimates
Project Costs Change from Estimates	Medium - Low	Lower overall savings percentage and higher payback	Project management, contract language, 8% materials purchase (3% buffer)
Regulatory changes in Xcel offerings and rates	Low	Loss of \$1.5M in Solar*Rewards bill credits	None



Evaluating Pros and Cons of Today's Decision

Pros

- First on-site rooftop solar project on county facilities
- Achieve meaningful GHG reductions
- Evaluate how we leverage this technology for future building planning
- Improve long-term utility budget predictability

Cons

- Risk of 10%+ of initial investment
- Payback is not guaranteed – based on utility rates
- If buildings decommissioned early, loss of planned payback
- Final structural feasibility unknown
- Conceptual design cost is estimated



Solar Investment and Payback Calculations

See Handouts



Board Direction Needed



Continue with solar project feasibility assessment



Advance initial investment of \$393,674 to purchase equipment and secure ITC