Solar Power at Maryland DOT
About MDOT

BUSINESS UNITS

The Secretary's Office (Headquarters)
Aviation Administration
Highway Administration
Motor Vehicle Administration
Port Administration
Transit Administration
Transportation Authority
Annual Energy Consumption

**UTILITY**
- 395,000 MWH
- $ 35M
- 275K MT CO2E

**SOLAR**
- 2,300 MWH
- $ 265K
- 1.6K MT CO2E
Why Solar?

**SOCIAL**
- Reliable and resilient energy source
- Improved public health

**ENVIRONMENTAL**
- Greenhouse gas emission reduction
- Water pollution reduction

**ECONOMIC**
- Local, well-paying jobs
- Affordable, stable energy prices
State & Federal Incentives

- **RENEWABLE PORTFOLIO STANDARD**
  - 50% by 2030
  - 14.5% solar carve out

- **GREENHOUSE GAS REDUCTION ACT**
  - 40% by 2030

- **COMMUNITY SOLAR**

- **NET METERING**

- **ENERGY ADMINISTRATION GRANTS**

- **INVESTMENT TAX CREDIT**
  - 30% until 2019
  - 26% until 2020
  - 22% until 2021
  - 10% thereafter

- **5-YR MODIFIED ACCELERATED COST RECOVERY SYSTEM (MACRS)**
Master Services Agreement

- Designed to promote innovation and competition
- 5-year contract, 2-year renewal
- Qualify master contractors
- Secondary competition for tasks
- Power purchase & license agreements (25-year term)
- Energy performance, storage, microgrids, electric vehicle charging
- Buyout option
- Cooperative agreement
Task Order Process

- MDOT SELECTS SITE(S) AND RELEASES TASK ORDER RFP TO MASTER CONTRACTORS

- MASTER CONTRACTORS ANALYZE SITES AND SUBMIT PROPOSAL

- MDOT AWARDS TO MASTER CONTRACTOR WITH MOST ADVANTAGEOUS PROPOSAL

- MASTER CONTRACTOR FINANCES, DEVELOPS, DESIGNS, CONSTRUCTS, COMMISSIONS, OPERATES, MAINTAINS AND DECOMMISSIONS

- MDOT PROVIDES THE LAND AND PURCHASES SOLAR POWER, OR COMMUNITY BUYS POWER
Benefits

**DEVELOPER**

- Receives all tax incentives (ITC & MACRS)
- Long-term agreement with MDOT to buy energy produced

**MDOT**

- Zero upfront capital cost
- Full utilization of Federal tax incentives (ITC & MACRS)
- Favorable fixed electricity rate
- License revenue (Community Solar, EV chargers)
- Solar Renewable Energy Credits (SRECs)
Task Orders Underway

- 6 MDOT MTA LIGHT RAIL PARK & RIDES
  - 5 MW, 6,835 MWH/yr, 4,833 MT CO2e/yr

- 2 MDTA PARK & RIDES
  - 1.5 MW, 2,050 MWH/yr, 1,450 MT CO2e/yr

- 13 ADDITIONAL MDOT MTA PARK & RIDES READY
  - 14 MW, 19,137 MWH/yr, 13,533 MT CO2e/yr
Sites Under Review

- Airport
- Port
- Transit-oriented Development
- Noise Barriers
- Unimproved Land
Timeline

April 2016
- Secretary authorized evaluation

July 2016
- Request for Information released

October 2016
- Secretary approved project
  * No upfront capital
  * No impact to operations

December 2016
- Governor's Office approved project

June 2017
- Request for Proposal released

August 2017
- Proposals received

February 2018
- Master Contract awarded
Challenges

- Competing Use of Property
- Structural Integrity of Existing Infrastructure
- Safety & Security
- Utilities
- Signage
- Operation & Maintenance
- Chesapeake Bay Water Quality Treatment
- Interconnection
Lessons Learned (so far)

- Existing Leases & Bonds
- Support from Other State Agencies
- Outreach to Other State Dots
- State-Wide Bulk Energy Procurement
- Legal Support - Procurement, Energy, Real Estate
- Multi-Discipline Team
- Technical Expertise
- Existing Internal Approval Processes
- Separate Electric Vehicle Charging
Contact

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