

Soladigm

Advanced Dynamic Windows

DOE Project Update
June 28, 2012





▶ **Project Goal**

Transition Soladigm's prototype technology to a scalable manufacturing process at a cost and quality for mass adoption

▶ **Specific Objectives**

1. Build, test, and validate an electrochromic pilot production line
2. Fabricate dynamic IGUs with a SHGC of 0.09-0.48, meeting the ASTM E-2141 durability standard
3. Demonstrate that the process can be commercialized for a price premium of \leq \$20 /sf over low-e IGUs
4. Develop a roadmap to a price premium of \leq \$5 /sf

Results: Production Process



Start of Project



Lab-scale reactor



Q1, 2011



Pilot-scale in-line reactor



2012



Full-volume production facility



Results – ASTM E 2141 Durability Testing

▶ Project Description

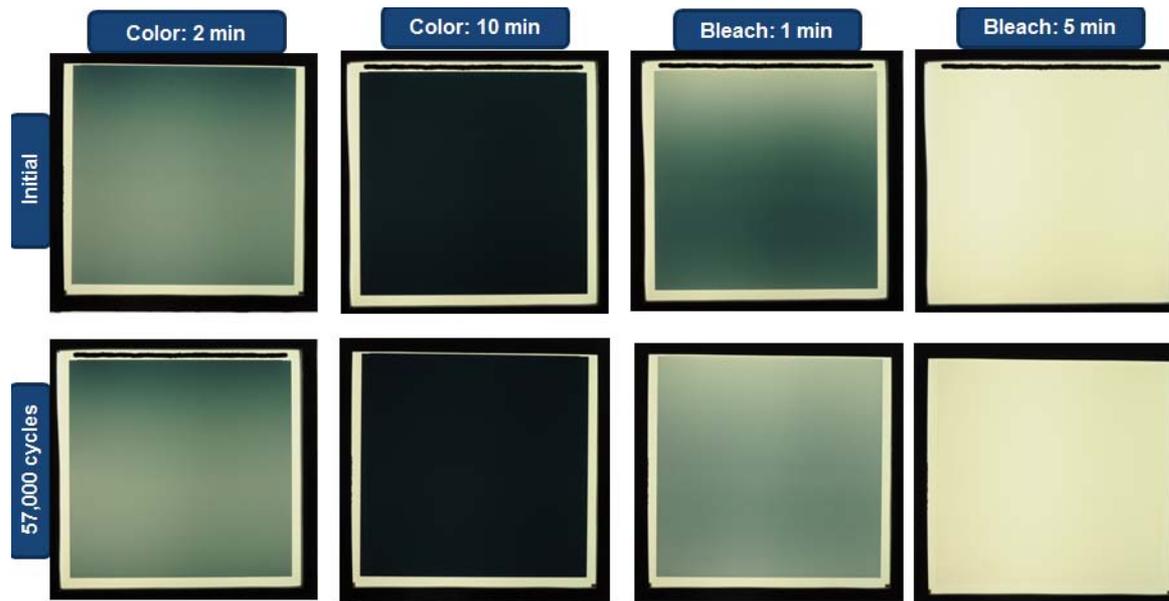
- Solar cycling (1 sun) at 85°C for >50,000 cycles (~7 months) at NREL

▶ Goal/Success Criteria

- Maintain $\%T_{\text{bleach}} > 50\%$, $\%T_{\text{color}} < 12.5\%$ (PTR > 4) with no visual degradation

▶ Result

- NREL test windows completed 57,427 cycles with stable performance





- ▶ **The project was slated at a 40% / 60% cost share**
- ▶ **Final project expenditures were**

Soladigm (50%)	Federal	Total
\$3,436,886	\$3,467,541	\$6,903,427



Commercialization

- ▶ Soladigm's Dynamic Glass is commercially available in 2012
- ▶ Soladigm has announced products and distribution partners for both the commercial and residential markets
- ▶ Ongoing product validation via private and commercial case studies

Validation

- ▶ ESTCP project - DoD Technology Demonstration at the Marine Corps Air Station in Miramar, CA