OPPORTUNITY
What have previous studies demonstrated about the potential for electrochromic (EC) windows?

TECHNOLOGY
How do EC windows work?

WINDOWS TINT IN RESPONSE TO EXTERNAL CONDITIONS OR USER OVERRIDE

M&V
Where did Measurement and Verification occur?

RESULTS
How did EC windows perform in M&V?

CONTROL
BASELINE CONDITIONS AND OCCUPANT BEHAVIOR DETERMINE SAVINGS
In Sacramento, most blinds remained lowered and darker tint levels predominated, resulting in a 62% increase in lighting energy. In Portland, 40% more blinds were left raised and lighter tint levels predominated, resulting in 36% lighting energy savings but a 2% HVAC increase.5

DEPLOYMENT
Where does M&V recommend deploying EC windows?

FACILITIES WHERE OUTSIDE VIEWS ARE CRITICAL
A previous GPG study recommended EC windows where glare control is required but blinds would interfere with mission, such as Land Ports of Entry. EC windows also could enhance architectural features that provide a connection with the outdoors, such as skylights and atriums, though this has not been evaluated.

1A Pilot Demonstration of Electrochromic and Thermochromic Windows in the Denver Federal Center, Eleanor S. Lee (LBNL), March 2014, p.4
2Ibid, p.1
3Electrochromic Window Demonstration at the Donna Land Port of Entry, Luís L. Fernandes (LBNL), May 2015, p.37
4Electrochromic Window Demonstration at the John E. Moss Federal Building, Sacramento, Luís L. Fernandes (LBNL), August 2017, p.54 and Electrochromic Window Demonstration at the 911 Federal Building, Portland Oregon, Eleanor S. Lee (LBNL), August 2017, p.8
5Ibid, p.8 and p.136
6Ibid, p.3 and p.7
7Ibid, p.101 and p.7

LAWRENCE BERKELEY NATIONAL LABORATORY assessed occupant satisfaction with EC windows in two buildings with curtain-wall construction—the 911 Federal Building in Portland, Oregon and the John E. Moss Federal Building in Sacramento, California.

LAWRENCE BERKELEY NATIONAL LABORATORY assessed occupant satisfaction with EC windows in two buildings with curtain-wall construction—the 911 Federal Building in Portland, Oregon and the John E. Moss Federal Building in Sacramento, California.

LAWRENCE BERKELEY NATIONAL LABORATORY assessed occupant satisfaction with EC windows in two buildings with curtain-wall construction—the 911 Federal Building in Portland, Oregon and the John E. Moss Federal Building in Sacramento, California.

LAWRENCE BERKELEY NATIONAL LABORATORY assessed occupant satisfaction with EC windows in two buildings with curtain-wall construction—the 911 Federal Building in Portland, Oregon and the John E. Moss Federal Building in Sacramento, California.