Economic Impacts from the Boulder County, Colorado, ClimateSmart Loan Program: Using Property-Assessed Clean Energy Financing

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Executive Summary

This report examines the economic impacts (including job creation) from the Boulder County, Colorado, ClimateSmart Loan Program (CSLP), an example of Property-Assessed Clean Energy (PACE) financing. The CSLP was the first test of PACE financing on a multi-jurisdictional level (involving individual cities as well as the county government). It was also the first PACE program to comprehensively address energy efficiency measures and renewable energy, and it was the first funded by a public offering of both taxable and tax-exempt bonds. The first phase of the residential CSLP financed about $9.8 million in residential energy retrofits, most of which were completed in 2009. This report focuses on 598 project invoices and $9.0 million in project spending.

The report provides a program overview and economic impact analysis of program spending and energy savings using an input-output (I-O) model. The report also provides a qualitative assessment of factors that affected the resulting economic impacts, and profiles some program participants and contractors. The analysis focuses on Boulder County benefits but also includes an assessment of associated statewide economic benefits.

Results of the analysis indicate that:

- CSLP spending in Boulder County alone contributed to 85 short-term jobs, more than $5 million in earnings, and almost $14 million in economic activity in the county.
- CSLP spending supported another 41 short-term jobs throughout the state but outside of Boulder County, $2 million in additional earnings, and almost $6 million in additional economic activity statewide.
- Assuming the program were extended with the same annual funding and participation, the 5- and 10-year trajectory of economic impacts would forecast additional benefits and sustained job opportunities.
- Reduced energy use saved participants about $125,000 during the first year on their electric and gas utility bills.

Total CSLP costs for Phase 1, including the development of a risk-management reserve fund, loan fees, loans, and other costs, totaled about $13 million. Short-term in-county benefits alone exceed this investment. Statewide economic benefits enhance the program value.

From a qualitative perspective, there are indications that declining program implementation costs (including interest rates and costs related to the reserve fund, as well as marketing and administrative fine-tuning) would improve economic results in future CSLP funding cycles.

Program design decisions, including one that brought in a high percentage of out-of-town contractors, resulted in many of the economic benefits leaking from the local economy. Yet the program had a variety of objectives, including not only creating local jobs but also reducing greenhouse gas emissions from a range of measures. Some products and skill sets needed to meet these objectives were not readily available in the county. Further, the CSLP aimed to prime the pump for green jobs development in the county and statewide.

By far, the greatest number of jobs gained (57% of in-county jobs) were related to solar photovoltaic (PV) projects. However, the first-year energy savings from PV are relatively small.
compared to the upfront cost of a PV installation, which is designed for long-term (30-year), fuel-free operation.

The qualitative assessment reveals that the CSLP spurred significant energy retrofit spending beyond that reflected on loan applications. Many residents attended CSLP informational sessions to learn more about potential home improvements, but then ended up financing those improvements through channels other than the CSLP, such as home equity lines of credit (HELOC), cash, or in the case of PV systems, leasing the system from a solar company. Cash spending and alternatively financed spending probably increased the total of all program-related spending by 20% or more. Most of this spending escaped documentation because it encompasses many possibilities, from the PV system that was purchased using home-equity lending to the replacement of leaky windows with those of a better quality, that did not meet loan qualification standards. Additionally, there were expenditures for retrofit-related paint jobs and cosmetic improvements, as well as major home remodels inspired by the availability of low-interest financing for at least part of the job. The relationship of these expenditures to the CSLP program was confirmed by surveys of CSLP workshop registrants and energy project contractors. CSLP program participants profiled in this report shed extra light on how the availability of PACE financing spurred the market for energy efficiency and renewables.

The Boulder County ClimateSmart program is one of only a handful of local PACE financing programs that reached implementation before the Federal Housing Finance Agency (FHFA) effectively placed a moratorium on such programs in July 2010. The CSLP proceeded with implementation of a commercial PACE program, but it suspended the residential program, which was poised for Phase 2 implementation. The findings of this study show that continuing the CSLP would have additional benefits well beyond the increased cost-effectiveness from administrative and marketing lessons learned. These benefits include:

- Significant, long-term utility bill savings for participants
- Job creation for Boulder County every year, including more than 90 jobs in 2020 alone if the program were continued to that year
- An increase in overall economic activity in the county every year for the duration of the program. Countywide economic output in 2020 alone would increase by approximately $15 million
- Expansion of statewide economic impacts and the likelihood that a growing market for energy efficiency and renewables could attract higher-value manufacturing and related job benefits to the state.

Arguably, programs like the CSLP “prime the pump” establish a market for energy efficiency and renewable energy products that could be manufactured profitably in-state, creating much greater job impacts and economic benefits.