

### United Illuminating

#### Energy Blueprint Program

United Illuminating's (UI) Energy Blueprint program offers financial incentives to commercial, industrial, and institutional customers who incorporate select energy-efficiency measures into the design of their new buildings, major renovations, tenant build-outs, and equipment replacement projects, as well as efficient process equipment installations. For customers who install a comprehensive set of specified program measures, additional incentives are offered. Grants are also available to cover design fees and building commissioning.

The Energy Blueprint program began in 1990. Thirty-four percent of the 185 projects initiated in the three years of its existence have been new construction projects. Lighting improvements are the most frequently installed measures. Incentives are calculated either through a Prescriptive Design Path, which includes menu-driven and custom rebates, or a "System Performance Design Path." Incentives for the System Performance Design Path are calculated based on computer modeling of the building performance.

The Energy Blueprint program offers incentives for a broad range of energy-efficiency measures. Incentives are paid for common lighting equipment and controls, heating and cooling equipment, building envelope improvements, and high-efficiency motors and variable speed drives. In addition UI pays incentives for exterior shading devices, automatic shades, louvers and drapes, high efficiency door seals, vestibule doors, dual fuel heat pumps, water source heat pumps, ground source heat pumps, condensing units, heat pump water heaters, thermal cool storage, ambient reset controls for cooling temperature, economizers, light activated or programmable set-back thermostats, heat pipes, liquid pressure pumps with superheat suppression, carbon monoxide detectors, geothermal ground loops, and process equipment and systems.

Annual energy savings from projects committed to from 1990-1992 were 2.35 GWh, 5.03 GWh, and 5.75 GWh respectively, for total annual energy savings of 13.13 GWh. Annual capacity savings were 1.5 MW in 1992, for a program total of 4.03 MW. During the first year of the program 30 contracts were signed and a total of 1.0 million square feet were involved. In 1991, 69 contracts were signed for projects, for a total of 3.1 million square feet; 26 of the 1991 contracts were for new construction projects. Participation in 1992 increased to 86 participants, for a total of 2.8 million square feet.

UI spent \$2.98 million on the Energy Blueprint program between 1990 and 1992. While total expenditures have risen each year, UI's cost per participant has dropped each year, from the high of almost \$23,400 per project in 1990 to the 1992 level of \$13,700. The Results Center calculation of cost of saved energy shows that the program's cost has consistently been under 2 ¢/kWh, and in 1992 the cost ranged from 0.90 ¢/kWh to 1.39 ¢/kWh depending on the discount rate used.

#### UNITED ILLUMINATING Energy Blueprint Program

**Sector:** Commercial and industrial new construction, renovations, equipment replacements, and tenant fit-outs

**Measures:** Lighting, HVAC, building envelope, and custom measures

**Mechanism:** Design grants, modelling, and incentives for installation of identified measures

**History:** Started in 1990

##### 1992 Program Data

Energy savings: 5.75 GWh  
Lifecycle energy savings: 100.4 GWh  
Peak capacity savings: 1.51 MW  
Cost: \$1,175,700

##### Cumulative Data (1990 - 1992)

Energy savings: 22.86 GWh  
Lifecycle energy savings: 228.5 GWh  
Peak capacity savings: 4.031 MW  
Cost: \$2,980,900

The Results Center produced 126 profiles of the most successful energy efficiency and renewable energy programs in the United States and around the world in the early and mid 1990s. With the support of the John D. and Catherine T. MacArthur Foundation, Ted Flanigan directed a research team at Colorado-based IRT Environment to produce and distribute these exceptional examples. Thanks to strong demand for solid case studies, The Results Center was supported by dozens of major utilities and energy associations worldwide. Today, The Results Center is managed again by Ted Flanigan, now at California-based EcoMotion Incorporated, a firm focused on strategic consulting, information dissemination, program design, outreach services, and aggressive implementation. To nominate highly successful programs, contact: The Results Center, c/o EcoMotion, 15375 Barranca Parkway, F-104, Irvine, CA 92618, (949) 450-7155, or [TFlanigan@EcoMotion.us](mailto:TFlanigan@EcoMotion.us)

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