ICMA 2012

Program Excellence Awards

Community Sustainability Award

City of Surrey

Corporate Emissions Action Plan

50,000 and Greater

 2012 Annual Awards Program

## Program Excellence Awards Nomination Form

## Deadline for Nominations: March 16, 2012

Complete this form (sections 1 and 2) and submit with your descriptive narrative.

### SECTION 1: Information About the Nominated Program

Program Excellence Award Category *(select only one)*:

Community Health and Safety

Community Partnership

X Community Sustainability

Strategic Leadership and Governance

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of program being nominated: | Corporate Emissions Action Plan | | | |
| Jurisdiction(s) where program originated: | City of Surrey | | | |
| Jurisdiction population(s): | 484,000 | | | |
| Please indicate the month and year in which the program you are nominating was fully implemented. (Note: All Program Excellence Award nominations must have been fully implemented by or before January 31, 2011, to be eligible. The start date should not include the initial planning phase.) | | | | |
| Month: |  | Year: | | 2009 |
| Name(s) and title(s) of individual(s) who should receive recognition for this award at the ICMA Annual Conference in Phoenix, Arizona, October 2012. (Each individual listed MUST be an ICMA member to be recognized.): | | | | |
| Name: | Murray Dinwoodie | | | |
| Title: | City Manager | | Jurisdiction: | City of Surrey, British Columbia |

### SECTION 2: Information About the Nominator/Primary Contact

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of contact: | Michael McGreer | | | |
| Title: | Economic Development Analyst | | Jurisdiction: | City of Surrey, British Columbia |
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### Submitting a Nomination

Forward the nomination form and descriptive narrative to be received at ICMA by close of business on **March 16, 2012**. Please email all submissions to: [awards@icma.org](mailto:awards@icma.org).

Questions should be addressed to ICMA’s Awards Program at [awards@icma.org](mailto:awards@icma.org) or 202/962-3656.

**PROJECT SUMMARY**

In 2008, the City of Surrey signed the BC Climate Action Charter, which states that local governments will agree to develop strategies and take actions to achieve the following goals:

1. Be carbon neutral in respect of their operations by 2012;
2. Measure and report on their community’s green house gas (GHG) emissions profile; and
3. Create complete, compact, more energy efficient rural and urban communities.

To achieve these goals the City created the Corporate Emissions Action Plan (CEAP). Through the CEAP the City established a baseline measurement of its energy use and GHG emissions. The CEAP also defines opportunities to reduce energy consumption and GHG emissions from the City’s corporate operations and identified 13 actions to reduce emissions in the areas of buildings, fleets, infrastructure, and leadership and engagement. The initial results are promising, showing a 6.5% decrease in GHG emissions between 2009 and 2010.

**PROBLEM ASSESSMENT**

The City of Surrey has committed to tracking its corporate energy use and GHG emissions as well as reducing its energy use to meet its obligations under the BC Climate Action Charter. Furthermore, Surrey has committed to reducing its GHG emissions 20% per capita by 2020 and 80% per capita by 2050.

**PROGRAM IMPLEMENTATION AND OUTCOMES**

The first phase of the CEAP has focused on making city buildings more energy efficient. Buildings provide ‘low-hanging fruit’ where the City can achieve significant energy conservation and GHG reductions in the near-term. There is another strategic reason for the focus on buildings as the first priority of the CEAP. The City is undergoing a period of rapid growth. According to the 2011 census, Surrey is the third fastest-growing city in Canada. To accommodate the rapid growth the City has initiated a significant capital works program. The CEAP is focused on capitalizing on the opportunity presented by the construction of new city-owned buildings by ensuring the new buildings are more energy efficient. This section outlines 3 strategies to reduce energy use in buildings and identifies the realized or anticipated energy savings where possible.

1. **Ensure high energy performance of new facilities**

**New City Hall:** The New City Hall, designed in 2011, targets LEED Gold certification and includes a geothermal heating and cooling system.

* Anticipated savings of 1000 GJ of gas annually
* Anticipated savings of 140,000 kWh annually

**Animal Care Facility:** The Surrey Animal Care facility, designed in 2011, targets LEED certification and includes a geothermal heating and cooling system.

**City Centre Library:** City Centre Library was completed and opened, targeting LEED Silver Certification.

**Fire Hall # 14:** Fire Hall # 14 construction was completed, with building systems designed for energy efficiency. A solar hot water preheat system was installed as part of this project.

1. **Conduct audit and retrofit activities in City facilities**

**Energy Retrofits:** Past audits resulted in the completion of several retrofits in 2010 and 2011. The following are a list of major retrofit projects that were initiated for energy savings with short term payback:

* **South Surrey Indoor Pool**: Replacement of boiler and installation of a dehumidification system with heat recovery.
* **Newton Wave Pool**: Replacement of air handling systems and installation of a dehumidification system with heat recovery.
* **RCMP Headquarters**: Replacement of boiler and chillers with high efficiency units.

**Surrey Sports & Leisure Complex**: installation of heat recovery systems to take advantage of waste heat from the arena refrigeration system and heat recovery from warm pool air prior to exhausting air outside.

Expected savings:

* Anticipated 7,900 GJ gas
* Anticipated 12,000 GJ gas
* Anticipated 178,000 kwh electricity and 760 GJ gas
* Anticipated 18,200 GJ gas savings

1. **Include alternative energy evaluation in replacement, renovation, and maintenance activities**

**City Hall Chillers:** All equipment replacement has included the highest efficiency equipment as per evaluation by City mechanical engineering consultants. The replacement of aging chillers in City Hall was a major renovation that resulted in significant savings.

* Anticipated savings 220,000 kwh electricity

**RESULTS AND OUTCOMES**

**2010 Corporate Emissions**

As part of the CEAP, the City of Surrey tracks its energy use and GHG emissions to monitor the City’s performance over time and the effectiveness of its sustainability initiatives. In 2010, the City of Surrey’s corporate GHG emissions were 15,336 t CO2e (tonnes of carbon dioxide equivalent), with 47% of these emissions coming from fleet vehicles, 41% from natural gas, and 12% from electricity. Total energy use was 472,942 GJ, at a total cost of $10,096,966 to the City. Emission contributions by area are shown in Figure 1.

The City’s initial sustainability and energy reduction initiative are showing promising early results. Total emissions in 2010 decreased from 16,413 t in 2009 to 15,336 t of CO2e in 2010.

**LESSONS LEARNED**

**Continue to evolve:** Regularly assess data and change programs accordingly to ensure they remain effective and that resources are deployed where they should be.

**Be innovative:** Approach entrenched problems from a new direction. Review best practices in other communities and countries for inspiration.

**Share:** Share what you learn – successes as well as mistakes – with other staff, partners and communities. Best practices were key in the development of Surrey’s programs.

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