

# *Community Energy Mapping: research in action in the City of Prince George*

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City of Prince George

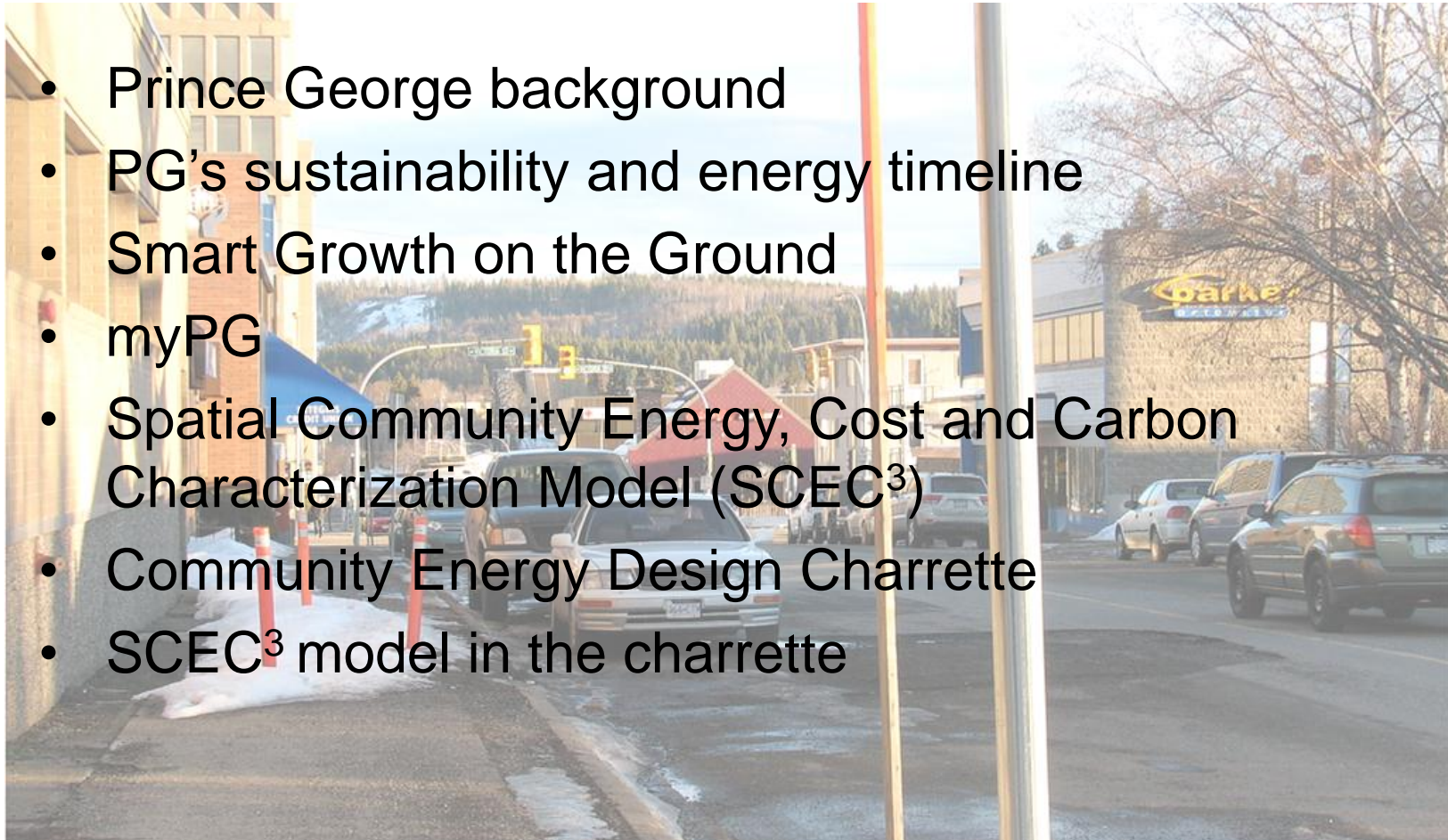
Federation of Canadian Municipalities Sustainable Communities Conference  
Putting Energy and Emissions on the Map

February 9<sup>th</sup>, 2011

Victoria, British Columbia

# Outline

- Prince George background
- PG's sustainability and energy timeline
- Smart Growth on the Ground
- myPG
- Spatial Community Energy, Cost and Carbon Characterization Model (SCEC<sup>3</sup>)
- Community Energy Design Charrette
- SCEC<sup>3</sup> model in the charrette



# The City of Prince George

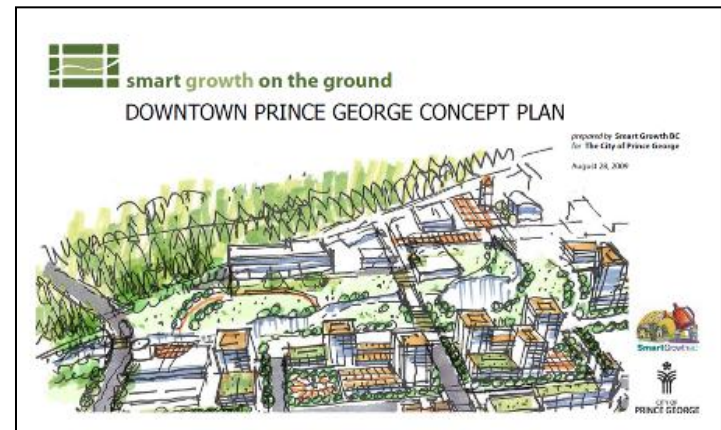
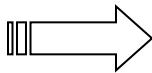
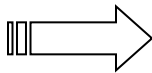
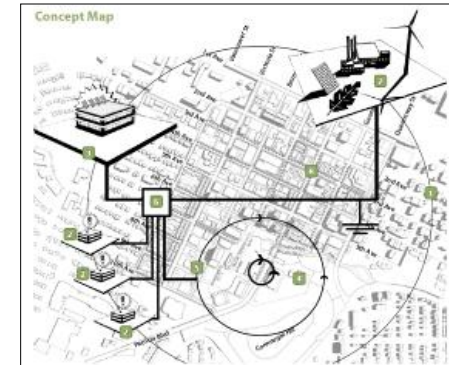
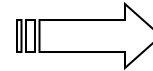
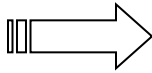
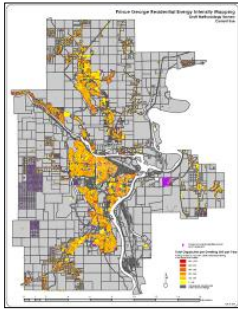
- BC's 'Northern Capital'
- 75,000 population
- Decline of forestry industry
- 'Slow growth' paradigm
- Downtown
  - City beautiful pattern
  - Revitalization of mixed use
- Suburban
  - Focus of most recent developments
  - Value of residences higher in suburbs than downtown



# Prince George Energy Planning Timeline

- 2002: Signs on to Partners for Climate Protection
- 2005: First GHG Inventory and Reduction target
- 2007: CEEP is developed
- 2007: Council endorses emission reduction targets and supports implementation of CEEP
- 2007-2009: Smart Growth on the Ground
- 2008: Beginning of collaboration with NRCan (SCEC<sup>3</sup>)
- 2009: Beginning of myPG process (ICSP), OCP update
- 2011: Energy Design Charrette

# Smart Growth on the Ground (2007 – 2009)



[www.sgog.bc.ca](http://www.sgog.bc.ca)

## ICSP and OCP review (2009 – 2011)

- Integrated Community Sustainability Plan (ICSP)
- Official Community Plan (OCP) review
- Community scale

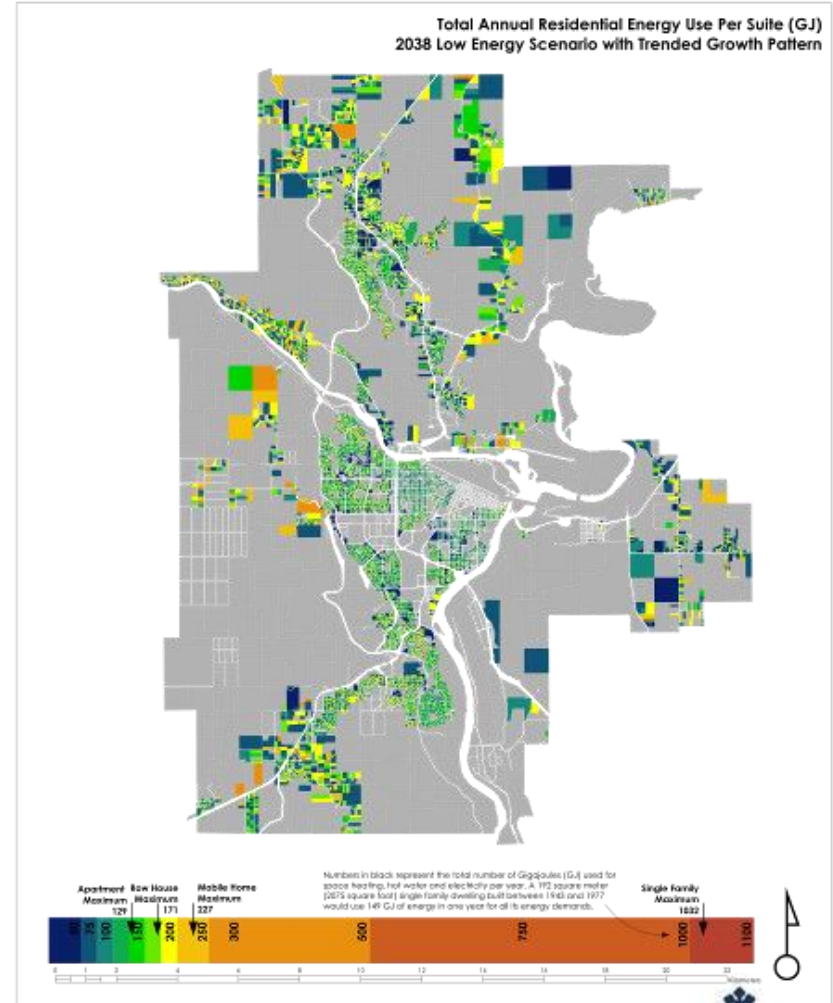


[www.mypg.ca](http://www.mypg.ca)



# SCEC<sup>3</sup> Model

- Spatial Community Energy, Carbon and Cost Characterization Model
- Housing, commercial and industrial building operating energy, carbon and costs
- Baseline and future scenarios based on land use allocation, building type, energy performance and utility rates
- Under 'low energy' scenario, houses and apartments would only achieve 2% reduction in GHG emissions from 2002 levels after 2028



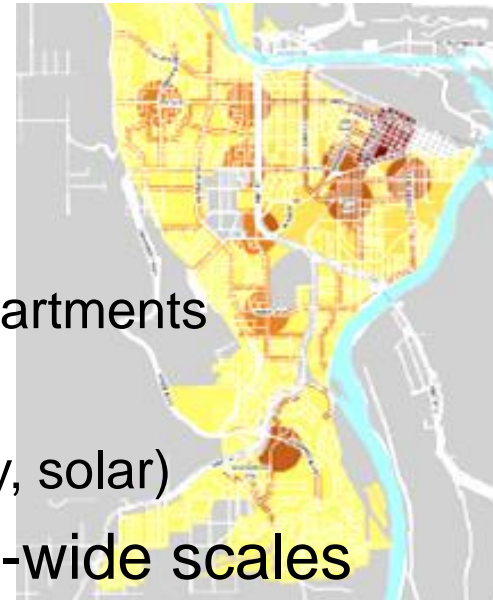
# Community Energy Design Charrette

- February 21, 2011
- First energy design charrette under a new program supported by BC Hydro
- Convene experts and stakeholders to discuss technologies, and evaluate scenarios towards GHG policy development
- Explore options for the Crescents neighbourhood



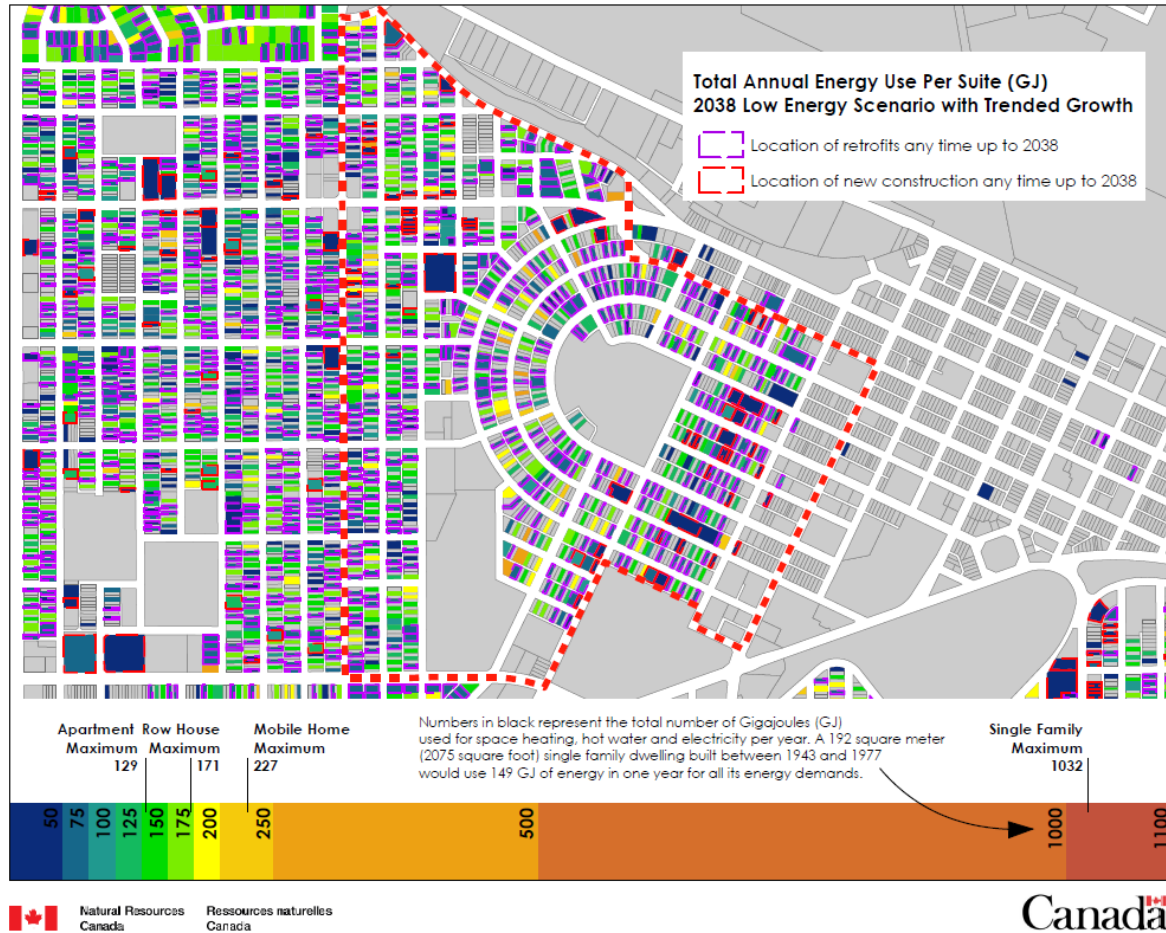
# Use of SCEC<sup>3</sup> model in Energy Charette

- ‘Centres and Corridors’ land use scenario
- Participants input sought on:
  - Types and rate of retrofits in existing houses and apartments
  - Types and number of new houses and apartments
  - Technologies for implementation (e.g. district energy, solar)
- Results developed on neighbourhood and city-wide scales
- Objectives:
  - Test the effectiveness of model outputs in the process
  - Demonstrate the use of model outputs in policy formulation





# Potential Retrofit & New Build Scenario



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Thank you very  
much!  
Merci beaucoup!

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