

# RENEWABLE CITIES: TECHNOLOGY, GOALS, AND IMPLEMENTATION

**20 MAY 2015**

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## **CGN 5605 Public Works Planning**

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# Goals & Objectives

- **Introduction and background of the “renewable city” concept**
- **Renewable city technologies**
- **Organizations promoting renewable cities and goals**
- **Masdar City and Tianjin Case Study**
- **Conclusions**

# Renewable Cities

- Today's sprawling cities are unsustainable, in both economic and environmental costs
- Goal of “renewable cities” is to develop cities that are sustainable and don't burden the environment
- Renewable cities will accomplish this via a combination of technology and design initiatives



**Green roof**



**Solar roadway**



**Smog eating façade**

# Renewable Cities

- **Is it worth creating new, renewable cities from scratch?**
- **Will inhabitants be able to make the sacrifices necessary to live in a renewable city?**
  - **Vehicle restrictions**
  - **Waste disposal restrictions**
  - **Limits on use of energy and water**

**Build new, or renovate existing?**



**Concept photo Tianjin Eco-City, China**

# Renewable Cities

## Masdar City, UAE

- Initial goal was to be zero-carbon and zero-waste, with 50,000 residents
- Goals have been scaled back due to global economic crisis



Conceptual image of Masdar City (L), and actual image dated January 2015 (R)

## Tianjin Eco-City, China

- Less aggressive sustainability goals
- Goal is to serve as a practical model for others to follow



Artist's depiction of Tianjin Eco-City at completion in 2020