Quantifying the Greenhouse Gas Impacts of a Green Hotel Certification on the City of Los Angeles

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LA’S CLIMATE ACTION PLAN

In 2015, the City of Los Angeles (LA) set goals to reduce its greenhouse gas (GHG) emissions 45% below its 1990 baseline by 2025. To help meet this target, LA uses the Green Lodging Program, which recognizes and promotes sustainable hotels with an eco-certification. Green Seal was elected the official green hotel certifier for the City of LA.

GREEN SEAL HOTEL CERTIFICATION

The Green Seal Standard for Hotels & Lodging Properties establishes environmental requirements for hotels and lodging properties in areas such as waste minimization, energy efficiency and conservation, and management of freshwater resources. The Standard consists of three levels of achievement:

- **BRONZE**: Entry level for building a strong foundation in sustainable practices
- **SILVER**: Mid-level for substantially reducing environmental impact
- **GOLD**: Advanced level for practicing leadership at the top levels of sustainability

PROJECT OBJECTIVES

1. Quantify Green Seal hotel certification impact on greenhouse gas emissions for certified hotels in LA using statistical analysis
2. Extrapolate emissions reductions to determine maximum potential reduction scenario for LA’s Climate Action Plan goals
3. Develop a user-friendly Excel-based tool for hotel managers to assess individual hotel potential savings
4. Analyze potential revenue increases from green hotel certifications by studying consumer preferences

RESULTS

1. **GHG REDUCTIONS FROM CERTIFIED HOTELS**
   
   Green Seal hotel certification significantly reduces greenhouse gas emissions for Silver- and Gold-certified hotels.

   - **GHGs by 8.7%**
   - **GHGs by 18.2%**

2. **GHG SAVINGS FOR LOS ANGELES**

   To meet LA’s 2025 target, the City must reduce its GHGs by 9 million metric tons CO₂. If all 997 hotels in LA achieved Gold certification, **Green Seal could contribute to these emissions reductions by a maximum of 6.4%**.

   - **GHGs by 2.1%**
   - **GHGs by 4.3%**

3. **USER-FRIENDLY TOOL FOR HOTELS**

   The Excel-based tool enables hotels to analyze the financial and environmental impacts associated with energy efficiency upgrades required under the green hotel certification. The tool provides the following outputs:

   - **Financial**: NPV, IRR, Simple Payback
   - **Environmental**: Energy Savings, GHG Impacts

4. **CONSUMER PREFERENCES FOR GREEN HOTELS**

   - **Survey 1**: Consumers are not willing to pay more for a hotel with a generic description of a green certification that one without a certification.
   - **Survey 2**: Consumers are willing to pay 5.5% more for a green-certified hotel with quantitative descriptions of environmental impacts than vague descriptions.

RECOMMENDATIONS

- **Quantitative Certification Requirements**: Currently, Green Seal has mostly qualitative certification requirements. By updating Green Seal’s requirements to be more quantitative, it can better assess the impacts of its certification on greenhouse gas emissions.
- **Extensive Data Tracking**: By maintaining detailed information about the efficiency upgrades that occur, Green Seal will be able to better attribute the direct causes of greenhouse gas emissions reductions of certified hotels.
- **Marketing with Numerical Values**: Since consumers respond more to emissions reductions than to a hotel’s sustainable practices, green-certified hotels should market their actual emissions reductions that occurred from certification.

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