Green Strategy Research on Industrial Project Case
工业项目中绿色建筑策略的研究

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Project Introduction

China Green Building Operation Certification

LEED Platinum/Gold
Main Target of Project

Principal Goals for Green Building

- 能源 Energy
- 水 Water
- 循环材料 Recycle Material
- 废弃物 Waste
- 碳排放 Carbon Emission

可持续发展经济 Sustainable Economy

企业社会责任 CSR

设计 Design

施工 Construction

安装调试 Installation

运行 Operation

Payback Period 4.5 years

Additional Capex for Green Technology 10M RMB
Selection of Green Strategy

Type of Green Strategy

- 被动型绿色建筑策略
  Passive Green Building Strategies
- 主动型绿色建筑策略
  Active Green Building Strategies
- 可再生能源利用策略
  Renewable Energy

投入 COST TO IMPLEMENT

可再生能源 RENEWABLES

产出 ENVIRONMENTAL BENEFITS

Principle to Choose Green Technology = Low or Zero Incremental Cost
Waste Collection

Identify main waste generate from manufacture process. Set regulation for collection, treatment and discharge to minimize environment influence. Harmful substance need store separately and keep certain distance from human activity area. People health need to be well considered such as noise, welding smog, paint mist, etc. Training and report system can support to improve situation continuously.
Water Efficiency

- Waste heat from manufacture line was collected to heat water for shower
- Rain water collection and bath water recycle to provide enough water for Landscaping and irrigation to save clean water
- Water-saving fixtures (3/4.5L Dual flush toilet, 0.5L Urinal, 1.9L/min Lavatory faucet, 6L/min Shower head) contribute to 40% annual indoor water saving.
- Native and drought-enduring plants used for landscaping
Energy-saving Contribution

- Baseline: Based on ASHRAE90.1-2007
- Design Case: Based on actual design Ground source heat pump + Fan coil units

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<thead>
<tr>
<th>Annual Energy Consumption (MWH)</th>
<th>Accumulated energy saving</th>
<th>Single energy saving</th>
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Green Construction

Environment Assessment

Investigate soil, water, air on project site to protect vulnerable population. Restore contaminant problem if any.

- Air Investigation
- Soil Investigation
- Ground water investigation
- Electromagnetic radiation investigation
- Geologic hazard identification
Green Construction

- Rain & Sewage Pipe Preinstall
- Temporary Cover on Soil
- Temporary Landscape
- Classified Waste Collection
- Soil Erosion & Condensation Control
- Dust Control
* Set 5 monitors in plant to measure temperature at 10am, 2pm and 4pm every day
Thank you