



## Working for an earth-friendly low-carbon society

### Proposal for a building with low CO<sub>2</sub> emissions

We proposed a plans for new construction and for facility maintenance and energy efficiency retrofits to reduce emissions of CO<sub>2</sub>.

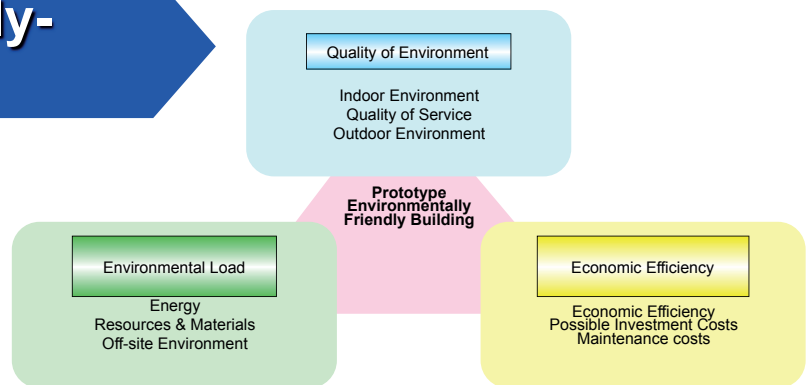
|  |   |   |
|--|---|---|
| <b>National policies</b> <ul style="list-style-type: none"> <li>◆The 3rd session of the Conference of the Parties to the United Nations Framework Convention on Climate Change</li> <li>◆Energy conservation policy</li> </ul> | <b>Client Needs</b> <ul style="list-style-type: none"> <li>◆Reduced utility costs</li> <li>◆Equipment renovation</li> <li>◆Corporate Social Responsibility</li> </ul> | <b>Social Needs</b> <ul style="list-style-type: none"> <li>◆Deregulation</li> <li>◆Global Environment Contribution</li> </ul> |
|--|---|---|

|  |   |                          |                |              |                |                      |                |  |
|--|---|--------------------------|----------------|--------------|----------------|----------------------|----------------|--|
| <b>Before</b><br>CO <sub>2</sub> Emissions: 9,000 t-CO <sub>2</sub> /yr<br>Crude oil consumption: 4ML / yr<br>Primary energy: 160,000 GJ/yr.<br>Utility cost: 300 million yen/yr | <p>Renovation for reducing emissions of CO<sub>2</sub></p> <table border="1"> <tr> <td>Refurbishment investment</td> <td>210million yen</td> </tr> <tr> <td>Subsidy(1/3)</td> <td>70 million yen</td> </tr> <tr> <td>Reduce utility costs</td> <td>60 million yen</td> </tr> </table> | Refurbishment investment | 210million yen | Subsidy(1/3) | 70 million yen | Reduce utility costs | 60 million yen | <b>After</b><br>CO <sub>2</sub> Emissions: <b>7,000 t-CO<sub>2</sub>/yr</b><br>Crude oil consumption: <b>3.2ML/yr</b><br>Primary energy: <b>130,000 GJ/yr</b><br>Utility costs <b>240 million yen/yr</b> |
| Refurbishment investment   | 210million yen  |                          |                |              |                |                      |                |  |
| Subsidy(1/3)   | 70 million yen  |                          |                |              |                |                      |                |  |
| Reduce utility costs   | 60 million yen  |                          |                |              |                |                      |                |  |

Example of health care building (42,000m<sup>2</sup>, 660beds)      Renovation for reducing the emissions of CO<sub>2</sub> proposed by FUJITA

### Prototype environmentally-friendly Office Building

Fujita provides our customers with the best balance of environmental performance and economic efficiency.



### CASBEE Comprehensive Assessment System for Built Environment Efficiency

$$\text{Built Environment Efficiency (BEE)} = \frac{Q(\text{Built Environment Quality})}{L(\text{Built Environment Load})}$$

BEE Value and Ranks of CASBEE

| Ranks          | Assessment    | BEE Values        |
|----------------|---------------|-------------------|
| S              | Excellent     | BEE ≥ 3.0, Q ≥ 50 |
| A              | Very Good     | 3.0 > BEE ≥ 1.5   |
| B <sup>+</sup> | Good          | 1.5 > BEE ≥ 1.0   |
| B <sup>-</sup> | Slightly Poor | 1.0 > BEE ≥ 0.5   |
| C              | Poor          | 0.5 > BEE         |

