Equipment Selection

Selecting the best equipment is very important in order to have an efficient performance of a power plant by having high efficiency and longer service lives. Table \_\_ presents the comparison of Chinese, US and European equipment based on the relative cost, average efficiency, service life and maintenance costs.

Table \_\_

Equipment Selection

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Relative Capital Cost | Php/kW | Average Efficiency | T1 years | T2 years | O&M |
| Chinese Equipment | ₱74,324,187,000.00 | 9.80 | 0.42 | 1 | 25 | ₱1,311,003,853.54 |
| US Equipment | ₱74,605,257,247.50 | 9.80 | 0.43 | 1 | 25 | ₱1,311,003,853.54 |
| European Equipment | ₱74,751,908,000.00 | 9.80 | 0.46 | 1 | 25 | ₱1,311,003,853.54 |

T1 – Interval of Major Maintenance

T2 – Interval Between Complete Replacement

Table \_ shows that equipment from the three different manufacturers differ in terms of relative capital cost and average efficiency. Further comparison of the given equipment will be shown in Table \_ which will be useful in selecting the best equipment.

Table \_

Comparison of Given Equipment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Chinese Equipment | | US Equipment | | European Equipment | |
|  |  | PHP | % | PHP | % | PHP | % |
| Total equity | Php | 23,430,758,451.45 |  | 23,401,741,208.81 |  | 23,529,258,208.87 |  |
| Total loan | Php | 8,918,902,440.00 |  | 8,952,630,869.70 |  | 8,970,228,960.00 |  |
| Total capital cost | Php | 74,324,187,000.00 |  | 74,605,257,247.50 |  | 74,751,908,000.00 |  |
|  | Php/kW | 148,648.37 |  | 149,210.51 |  | 149,503.82 |  |
| Average generation | GWh | 4200 |  | 4200 |  | 4200 |  |
| DSCR, first year | [ ] | 14.54 |  | 14.48594914 |  | 14.45753013 |  |
| FIRR | [ ] |  |  |  |  |  |  |

From Table \_\_, it can be observed that the given equipment are compared based on economic aspect such as the total amount of equity, loan and capital cost. Average generation, rate of return and debt service cover ratio of the three equipment are also compared.