PUBLIC NOTICE

M/s TT Energy Pvt. Ltd., proposes to construct a 99 MW hydro-electric project by utilizing the water of Rathong Chhu a tributary of Rangit River in the West District of Sikkim. The Salient features of the project are as under:

TING-TING HYDROELECTRIC PROJECT (2 X 49.5 MW)

SALIENT FEATURES:

<table>
<thead>
<tr>
<th>PROJECT LOCATION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Sikkim</td>
</tr>
<tr>
<td>District</td>
<td>West</td>
</tr>
<tr>
<td>Stream</td>
<td>Rathong Chu River</td>
</tr>
<tr>
<td>Location (nearest village)</td>
<td>Yuksum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DAM</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Latitude</td>
<td>27°13’ N</td>
</tr>
<tr>
<td>Longitude</td>
<td>88°12’ E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HYDROLOGY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Catchment area at Dam Site</td>
<td>372 sq. km</td>
</tr>
<tr>
<td>Average Annual Inflow</td>
<td>2578 mm</td>
</tr>
<tr>
<td>Probable maximum Flood Discharge (PMF)</td>
<td>1885 Cumec</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DAM AND APPURTENANT STRUCTURES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Concrete Gravity</td>
</tr>
<tr>
<td>Length of dam at top</td>
<td>98.5 m</td>
</tr>
<tr>
<td>Spillway Width</td>
<td>36 m</td>
</tr>
<tr>
<td>Full Reservoir Level</td>
<td>1165.00 m</td>
</tr>
<tr>
<td>Submergence area at FRL (approx.)</td>
<td>4.02 ha</td>
</tr>
<tr>
<td>Stretch of Reservoir</td>
<td>0.46 km</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>RIVER DIVERSION AT DAM</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Upstream Cofferdam</td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>35.8 m</td>
</tr>
<tr>
<td>Downstream Cofferdam</td>
<td></td>
</tr>
<tr>
<td>Crest Elevation</td>
<td>EL. 1125.00 m</td>
</tr>
<tr>
<td>Length</td>
<td>63.1 m</td>
</tr>
</tbody>
</table>

| Diversion Tunnel              |                     |
| Shape & Size                  | D-shaped, 3.6 m     |
| Length                        | 131.0 m             |
| Invert level at inlet         | EL. 1137.0 m        |
| Invert level at outlet        | EL. 1122.4 m        |

| INTAKE                         |                     |
| Location                      | On left bank, 5.9 m upstream of Dam axis|
| Design Discharge              | 46.13 Cumec          |
| Feeder Tunnel from Intake     | One no. of 4.4 m Horse Shoe Shaped |

| HEADRACE TUNNEL-HRT           |                     |
| Shape & Size                  | Horse Shoe, 4.4 m   |
| **Length** | 2141 m |
| **Design Discharge** | 46.13 cumec |
| **Adit to HRT** |  |
| **Location** | Just U/s of surge shaft |
| **Length** | 122 m |

**SURGE SHAFT**

| **Vertical Shaft** | Restricted Orifice Type |
| **Internal Diameter** | 10 m |
| **Height of Shaft** | 63.9 m |
| **Lining Type** | RCC Lining |
| **Vertical Lift Gate Size** | 3.4 m (W) x 3.4 m (H) |
| **Top of Surge Shaft** | EL. 1188 m |
| **Bottom of Surge shaft** | EL. 1124.1 m |
| **Max. Surge level** | EL. 1185 m |
| **Min. Surge level** | EL. 1127.80 m |
| **Orifice dia** | 2.25 m |
| **Adit to Surge Shaft Bottom** |  |
| **Shape & Size** | D-shaped, 4.5 m |
| **Entry Sill Level** | EL. 1120.70 m |
| **Length** | 77 m |

**PRESSURE TUNNEL PENSTOCK**

| **Total Length up to Bifurcation** | 760 m |
| **No. of anchor blocks** | 3 |
| **Branch penstock length** | 23.1 m & 32.6 m |

**POWERHOUSE**

| **Type** | Surface Powershouse |
| **Size** | 48 m (L) x 18 m (W) x 44 m (H) |
| **Number of units** | Two (2) |
| **Rated Discharge per unit** | 23.06 Cumec |
| **Turbine Speed** | 500 rpm |
| **Gross Head (monsoon period)** | EL. 924.00 m |
| **Installed Capacity** | 2 x 49.5 MW |
| **Annual Plant Load Factor (90% year)** | 0.473 |
| **Power Factor** | 0.9 |

**TRANSFORMER**

| **Type and capacity** | Single phase, 11kv/220 kv, 21.0 MVA |
| **Location** | Outdoor on left bank of the river |
| **Number** | 7 |

**TAILRACE TUNNEL**

| **Type** | Twin box, cut and cover tunnel |
| **Length (including tail pool)** | 140.8 m |
| **No. & Size** | 2 nos. x 4.8 m x 3.5 m |

**SWITCHYARD**

| **Type** | Outdoor |
| **Location of Switchyard** | Downstream of pH on right bank at EL. 940.00 m |
| **Bus bar Voltage** | 220 KV |

**TRANSMISSION LINE**

| **Type** | Switch yard to pooling station |
| **Type** | Single Circuit 220 KV |

**ESTIMATED COST**

<p>| <strong>Civil Works (including gates &amp; hoists)</strong> | Rs. 226.61 Crore |
| <strong>E&amp;M Works (including cost of transmission line to polling station)</strong> | Rs. 167.83 Crore |</p>
<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Basic Cost</td>
<td>Rs. 394.44 Crore</td>
</tr>
<tr>
<td>Escalation during construction</td>
<td>Rs. 34.76 Crore</td>
</tr>
<tr>
<td>Interest during Construction</td>
<td>Rs. 59.93 Crore</td>
</tr>
<tr>
<td>Total (Generation Works)</td>
<td>Rs. 489.13 Crore</td>
</tr>
<tr>
<td>Cost per MW installed</td>
<td>Rs. 4.91 Crore</td>
</tr>
</tbody>
</table>

**POWER BENEFITS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Energy Generation (90% Dependable year with 95% machine availability)</td>
<td>410.24 GWh</td>
</tr>
<tr>
<td>Annual Energy Generation in (90% Dependable year)</td>
<td>424.09 GWh</td>
</tr>
</tbody>
</table>

Whereas by notification of the Govt. of India in the Ministry of Environment & Forest, Govt. of India No. S.O. 1533 (E) dated 14th September 2006 issued under sub-section (1) and clause V of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 read with clause (d) of sub-rule (3) of Rule 5 of Environment (Protection) Rules, 1986 and in suppression of the notification no. S.O. 60 (E) dated 27th January 1994 as made mandatory under part II, section 7, sub-section 3 dated 14th September 2006, the State Pollution Control Board is required to conduct Public Hearing in the interest of the public for preparing recommendations based on the technical assessment of documents and data furnished by the Project Authorities for obtaining necessary environmental clearance from MoEF, Govt. of India. Therefore notice is hereby given to all concerned persons, having a plausible stake in the environment aspects of the project or activity and to provide responses in writing or by participating in the public hearing to be conducted on 17th June 2009 at Layathang Govt. Primary School Ground near Kanchendzonga falls, Chozo block, Gyalzing, West Sikkim at 10.00 A.M. onwards. Any person having plausible stake in the environmental aspects of the project or activity can submit their responses before the hearing date which may be addressed to the Member-Secretary, State Pollution Control Board-Sikkim, Department of Forest, Environment & Wildlife Management, Govt. of Sikkim, Deorali, Gangtok. Further access to the details of the project/executive summary, has been made available in the web-site [www.sikenvis.nic.in](http://www.sikenvis.nic.in) and at the offices of the State Pollution Control Board- Sikkim, Deorali, Gangtok, Office of the District Collector (West) Gyalzing, District Industry Office, Gyalzing, West Sikkim and Zilla Parisad Bhawan, Gyalzing, West Sikkim.

Sd/-

Member Secretary,

State Pollution Control Board-Sikkim,
Deptt. of Forest, Env. & W/L Management,
Government of Sikkim,
Deorali – Gangtok.