Athena Energy Ventures Private Limited

18th January, 2010
Athena Energy Ventures Pvt. Ltd.

List of Projects in Arunachal Pradesh

- Demwe Lower HE Project – 1750 MW
- Demwe Upper HE Project – 1800 MW
- Emra-I HE Project – 275 MW
- Emra-II HE Project – 390 MW
Athena Energy Ventures Pvt. Ltd.

Location of Projects in Arunachal Pradesh
Demwe Lower HE Project- 1750 MW

Arunachal Pradesh
Demwe Lower HE Project

Project Background

- Memorandum of Agreement signed on 9th July, 2007 with Government of Arunachal Pradesh (GoAP).
- Lohit River Basin (EL +300 m to EL +589 m) awarded to M/s Athena Energy Ventures Pvt. Ltd. on competitive bidding basis.
- Athena Demwe Power Pvt. Ltd. (ADPPL) formed as SPV for implementation of the Demwe Lower HEP Project.
- Project is located on Lohit River near Parashuram Kund, Lohit District, Arunachal Pradesh
- Largest Hydro Electric Project under Public Private Partnership Model with 26% equity participation from GoAP.
Demwe Lower HE Project

Project Location

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<th>From</th>
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<td>Dibrugarh (Nearest Airport)</td>
<td>215 km</td>
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<tr>
<td>Tinsukia (Nearest Railhead)</td>
<td>160 km</td>
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Demwe Lower HE Project

Salient Features

- Run-of-the River scheme with Installed capacity of 1750 MW (5 x 342 MW + 1 x 40 MW) with diurnal storage.
- Catchment Area - 20,174 sq km.
- Full Reservoir Level – EL 424.8 m.
- Diversion arrangement on right bank and left bank through underground tunnels.
- Height of Concrete Gravity Dam is 163.12 m from deepest foundation level.
- Intake structure with Rectangular forebay and inclined trash rack on right bank of Lohit River.
- 5 No 10 m dia Pressure Shafts leading to Power House.
- Surface power house on right bank of Lohit River about 650 m downstream of dam axis.
## Demwe Lower HE Project

### Construction Schedule

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**Activity Description Descriptions:**

- **Pre-Construction Activities:** Jul,07-Mar,11
- **Diversion Tunnels:** Apr, 2011 – Sep, 2012
- **Concrete Dam, Cofferd Dam:** July, 2011- Feb, 2016
- **Pressure Shaft:** May, 2011- Dec, 2015
- **Power House Civil Works:** May, 2011- Dec, 2015
- **Power House E&M Works:** May, 2011- Feb, 2016
- **Commissioning of 1<sup>st</sup> Unit:**
- **Commissioning 2<sup>nd</sup> & 3<sup>rd</sup> unit:**
- **Commissioning 4<sup>th</sup> 5<sup>th</sup> & 6<sup>th</sup> units:**
Demwe Lower HE Project

Quantities to be Transported to Project Site

- Cement: 16.7 Lakh MT
- Steel (Reinforcement): 109134 MT
- Steel (BOQ Plates): 24419 MT
- Steel (Structural): 8783 Tonne
Demwe Upper HE Project - 1800 MW

Arunachal Pradesh
Demwe Upper HEP

Project Background

- Memorandum of Agreement signed on 9th July, 2007 with Government of Arunachal Pradesh (GoAP).
- Lohit River Basin (EL +300 m to EL +589 m) awarded to M/s Athena Energy Ventures Pvt. Ltd. on competitive bidding basis.
- Lohit Urja Power Pvt. Ltd. formed as SPV for implementation of the Project.
- Project is located on Lohit River near Mompani, Anjaw District, Arunachal Pradesh
- One of Largest Hydro Electric Project under Public Private Partnership Model with 26% equity participation from GoAP.
Demwe Upper HEP

Project Location

From | Demwe Lower
-----|-------------
Dibrugarh (Nearest Airport) | 215 km
Tinsukia (Nearest Railhead) | 160 km
Demwe Upper HE Project

Salient Features

- Run-of-the River scheme with Installed capacity of ~1800 MW (6 x 300 MW);
- Catchment Area - 20,560 sq km;
- Full Reservoir Level - 584.0 m.
- 2 No 12.80 Dia and 710m long Diversion tunnels.
- Height Concrete Gravity Dam is 185.0 m from deepest foundation level.
- 6 No 7.0 m dia Pressure Shafts leading to Power House.
- Under ground power house on right bank of Lohit River.
# Demwe Upper HE Project

## Construction Schedule

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- **Pre-Construction Activities**: Jul, 07 - Mar, 12
- **Concrete Dam, Coffer Dam**: Apr, 2012 – Sep, 2013
- **Power House E&M Works**: May, 2012 – Feb, 2017
- **Pressure Shaft**: May, 2012 – Dec, 2017
- **Power House Civil Works**: May, 2012 – Dec, 2017
- **Commissioning of 1st Unit**: May, 2012 – Feb, 2017
- **Commissioning 2nd & 3rd unit**: May, 2012 – Dec, 2017
- **Commissioning 4th, 5th & 6th units**: May, 2012 – Feb, 2017
Demwe Upper HE Project

Quantities to be Transported to Project Site

- Cement: 17.2 Lakh MT
- Steel (Reinforcement): 112408 MT
- Steel (BOQ Plates): 25151 MT
- Steel (Structural): 9046 MT
Emra - II HE Project- 390 MW

Arunachal Pradesh
Emra - II HEP

- Memorandum of Agreement signed on 2\textsuperscript{nd} Feb, 2008 with Government of Arunachal Pradesh (GoAP) for development of Emra I & II HEPs on Emra River on BOOT basis.

- Complete Emra River Basin awarded to M/s Athena Energy Ventures Pvt. Ltd. on competitive bidding basis.

- Athena Emra Power Pvt. Ltd. formed as SPV for implementation of the Project.

- Project is located on Emra River Etalin, Dibang District, Arunachal Pradesh
Emra - II HE Project

Project Location
Emra - II HE Project

Salient Features

- Run-of-the River scheme with Installed capacity of 390 MW (3X130 MW).
- Full Reservoir Level – EL. 860.0 m.
- Diversion arrangement on left bank.
- Height of Concrete Gravity Dam is 120.00 m from deepest foundation level.
- Intake structure on right bank of Lohit River.
- 1 No 6.9 m dia & 4.1 km long Head race tunnel leading to Power House.
- 1 No 5.7 m dia, steel lined Pressure Shafts leading to Power House.
- Under ground power house on right bank of Emra River.
# Emra - II HE Project

## Construction Schedule

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- **Diversion Tunnels**: Apr, 2013 – Sep, 2014
- **Concrete Dam, Coffier Dam**: July, 2013- Feb, 2018
- **Pressure Shaft**: May, 2013- Dec, 2018
- **Power House Civil Works**: May, 2013- Dec, 2018
- **Power House E&M Works**: May, 2013- Feb, 2018
Emra-II HE Project

Quantities to be Transported to Project Site

- Cement: 3.49 Lakh MT
- Steel (Reinforcement): 25188 MT
- Steel (BOQ Plates): 5105 MT
- Steel (Structural): 1836 MT
Emra - I HE Project - 275 MW

Arunachal Pradesh
Emra - I HEP

Memorandum of Agreement signed on 2nd Feb, 2008 with Government of Arunachal Pradesh (GoAP) for development of Emra I & II HEPs on Emra River on BOOT basis.

- Complete Emra River Basin awarded to M/s Athena Energy Ventures Pvt. Ltd. on competitive bidding basis.

- Athena Emra Power Pvt. Ltd. formed as SPV for implementation of the Project.

- Project is located on Emra River Etalin, Dibang District, Arunachal Pradesh
Emra - I HE Project

Salient Features

- Run-of-the River scheme with Installed capacity of 275 MW (2 X 137.5 MW).
- Full Reservoir Level – EL. 1400.0 m.
- Height of Concrete Gravity Dam is 120.00 m from deepest foundation level.
- Intake structure on right bank of Lohit River.
- 1 No 6.0 m dia & 5.7 km long Head race tunnel leading to Power House.
- 1 No 5.0 m dia, steel lined Pressure Shafts leading to Power House.
- Under ground power house on right bank of Emra River.
### Emra - I HE Project
#### Construction Schedule

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- **Diversion Tunnels**: Apr, 2014 – Sep, 2015
- **Concrete Dam, Coffer Dam**: July, 2014- Feb, 2019
- **Pressure Shaft**: May, 2014- Dec, 2019
- **Power House Civil Works**: May, 2014- Dec, 2019
- **Power House E&M Works**: May, 2014- Feb, 2019
- **Commissioning of 1st Unit**: Possibly no specific dates indicated.
- **Commissioning 2nd unit**: Possibly no specific dates indicated.
Emra – I HE Project

Quantities to be Transported to Project Site

- Cement: 2.63 Lakh MT
- Steel (Reinforcement): 17198 MT
- Steel (BOQ Plates): 3848 MT
- Steel (Structural): 1384 MT
Thank You