

## 1. General

Position Title	DGM (Engineering), ADANI GREEN ENERGY LTD.
Name	Rudra Sankar Das
Date of Birth	25 <sup>th</sup> Jan 1981
Citizenship	Indian
Field of Experience	Hydro & PSP (Structural & Hydraulics) & Underground Works Total <b>20</b> Years's Experience including MTech.
Years of Experience	

## 2. Qualifications

- **B.Tech. in Civil** from NIT Silchar, 2003
- **M.Tech. in Hydraulic and Water Resource** from IIT Kanpur, 2006
- **MBA in Financial Management** from Indira Gandhi National Open University (IGNOU), 2015

## 3. Professional Overview:

Have 20 years' Experience in Hydropower and Pumped Storage Project Design, Layout Planning, BOQ & Tariff Calculations. Well Versed in Site Identification, Pre-Feasibility as well as Detailed Project Report Stage, Tender Stage Engineering, Detailed Engineering / Construction Drawings, Project Management Consultancy, Review Engineering etc. Experience in Structural Design of underground works like tunnels, shafts and caverns including primary and secondary lining works.

## 4. Professional History:

Period	Employing Organization	Country	Summary of activities performed relevant to the Assignment
April 2022	ADANI GREEN ENERGY, Ahmedabad, India <b>Position: DGM Engineering</b>	India	<ul style="list-style-type: none"><li>• Identification of potential PSP sites</li><li>• Prepared Financial Model for Cost &amp; Tariff Calculation</li><li>• Preparation of Tender Documents for award of DPR consultants, Owner's Engineer, EPC &amp; BOQ contracts and Miscellaneous Works for execution.</li><li>• Making TBER and evaluation of vendors.</li><li>• Award of Construction Contract package for Chitravathi PSP.</li><li>• Award of Consultancies for DPR Preparation for PSP in A.P &amp; Maharashtra.</li><li>• Review of Design by Vendors.</li></ul>
April 2014 to Mar 2022	L&T, Faridabad, India <b>Position: Sr. Engineering Manager</b>	India UAE Qatar	<ul style="list-style-type: none"><li>• Detailed Design of Hydro Power Projects and underground works related to Hydel, Railway, Road Tunnel Projects, Shafts, TBM, Micro tunnels.</li><li>• Review of Consultant's drawing for EPC Projects.</li><li>• Involving in planning and construction activities related to Project Commissioning.</li></ul>

			<ul style="list-style-type: none"> <li>Bidding for Tender Projects</li> <li>Project Coordination</li> </ul>
Nov 2012 to Mar 2014	CES/ Jacobs <b>Position: Project Manager</b>	India	<ul style="list-style-type: none"> <li>Detailed Design of Hydro and WR Projects.</li> <li>Preparation of DPR &amp; FR for Hydro Power Projects.</li> <li>Project Coordination</li> </ul>
Dec 2010 to Aug 2012	Coastal Projects Limited/ Jal Power Corporation Ltd <b>Position: Sr. Dy. Manager</b>	India	<ul style="list-style-type: none"> <li>Preparation of PFR/ FR/ DPR</li> <li>Project Coordination</li> <li>Getting approvals from central agencies for Water Supply &amp; Sewer Projects.</li> </ul>
April 2008 to Dec 2010	CES <b>Position: Sr. Engineer</b>	India	<ul style="list-style-type: none"> <li>Detailed Design</li> <li>Preparation of PFR/ FR/ DPR for Hydel &amp; WR Projects.</li> <li>Project Coordination</li> </ul>
Sept 2007 to April 2008	Scott Wilson India Pvt LTD <b>Position: Assistant Engineer</b>	India	<ul style="list-style-type: none"> <li>Preparation of PFR/ FR/ DPR for Hydel &amp; WR Projects.</li> </ul>
Jan 2007 to Sep 2007	WAPCOS <b>Position: Engineer Trainee</b>	India	<ul style="list-style-type: none"> <li>Preparation of PFR/ FR/ DPR for Hydel &amp; WR Projects.</li> <li>Detailed Design</li> </ul>
June 2006 to Jan 2007	CES <b>Position: Asst. Engineer</b>	India	<ul style="list-style-type: none"> <li>Preparation of PFR/ FR/ DPR for Hydel &amp; WR Projects.</li> </ul>
July 2003 to March 2004	Personal Consultancy Work	India	<ul style="list-style-type: none"> <li>Civil Structural Design.</li> </ul>

## 5. Relevant Project Experience:

Operating Projects Commissioned / In Progress	
<b>Name of Assign.</b>	<b>Chitravathi PSP (500 MW Capacity)</b>
Working Year	2022- Till Date
Location	Andhra Pradesh
Client	ADANI GREEN
Main project features	Open Loop Medium Head Project with min L/H ratio
Position held	<b>Design &amp; Engineering</b>
Activities performed	<ul style="list-style-type: none"> <li>• DPR Clearance (Discussion with Statutory Authorities like CEA, CWC, GSI)</li> <li>• Planning for Site Activities and design Control for DPR Submission</li> <li>• Coordination of Consultants for DPR Preparation &amp; Submission</li> <li>• ToR for various works, Prebid/ Post Discussion and finalization of agencies.</li> <li>• Tender Specification, BOQ, drawings for Preparation for Civil &amp; H&amp;M Package</li> <li>• Bid Evaluation &amp; Discussion with Contractor and associated EPC designer for construction package</li> <li>• TBER for evaluating Vendors.</li> <li>• Identification of Risk &amp; Risk Mitigation.</li> <li>• Hybrid model of Contract &amp; Award of work.</li> <li>• Inhouse design of Project Infrastructure Works like roads, buildings etc.</li> <li>• Design discussion for Tender Specification with Quality Experts and Vendors.</li> <li>• Review of EPC Contractor's design and drawings</li> </ul>
<b>Name of Assign.</b>	<b>PSP Development in States of Andhra Pradesh &amp; Maharashtra (15GW Capacity)</b>
Working Year	2022- Till Date
Location	Andhra Pradesh/ Maharashtra
Client	ADANI GREEN
Main project features	4 projects in Andhra Pradesh of 3700MW capacity 5 projects in Andhra Pradesh of 9600MW capacity
Position held	<b>Design &amp; Engineering</b>
Activities performed	<ul style="list-style-type: none"> <li>• Project Development from Identification to Award of Bid.</li> <li>• Coordination of Consultants for DPR Preparation.</li> <li>• Design Engineering for identification of suitable projects, Modification of Project capacity and optimization of Project Components for finalization of Capacity, ideal tariff and min risk projects.</li> <li>• Preparation of TOR for DPR, EPC &amp; BOQ contracts and other Miscellaneous works in projects.</li> <li>• Bid Evaluation &amp; Discussion with Consultant/ Contractor for different stages of project.</li> </ul>
<b>Name of Assign.</b>	<b>PSP Development in other States in India and Abroad</b>
Working Year	2022- Till Date

Client	ADANI GREEN
Position held	<b>Design &amp; Engineering</b>
Activities performed	<ul style="list-style-type: none"> <li>• Identification of Project</li> <li>• Technical due diligence of projects in Nepal, Bhutan, Africa and other countries with good hydro Potential.</li> <li>• Selection of Best Identified Project based on capacity, Tariff, Technical &amp; Construction Feasibility etc.</li> <li>• Applying for MOU with Authorities</li> </ul>

<b>Name of Assign.</b>	<b>Singoli Bhatwari HEP</b>
Working Year	2014 to 2020 (Commissioned)
Location	Uttarakhand, India
Client	LNTPL
Main project features	The project comprises design review of 22m high barrage, a 13 km HRT / penstock and powerhouse of 99MW installed capacity.
Position held	<b>Team Leader Design</b>
Activities performed	<ul style="list-style-type: none"> <li>• Prepared structural designs and construction drawings for Intake Structure, Barrage, Surge Shaft, Tunnels, Pressure Shaft, Power House etc.</li> <li>• Visit to site for checking the construction vs design aspects.</li> <li>• Prepared Reservoir Filling and O&amp;M manual related to civil works.</li> </ul>

<b>Name of Assign.</b>	<b>Lower Kopili H.E. Project</b>
Working Year	2020-2022
Location	Assam, India
Client	APGCL
Main project features	The project is a 120MW hydro project with a Gravity dam, HRT, Penstock, Surge Shaft, Valve House and Power House
Position held	<b>Team Leader Design</b>
Activities performed	<ul style="list-style-type: none"> <li>• The project has started in Sep, 20</li> <li>• The overall responsibility of coordination with detailed design contractor, inhouse design, site coordination and getting approval from client.</li> </ul>

<b>Name of Assign.</b>	<b>Lata Tapovan H.E. Project</b>
Working Year	2006 to 2016
Location	Uttarakhand, India
Client	NTPC Hydro Ltd
Main project features	The project comprises design review of 18m high barrage, a 7.35km headrace tunnel and power house of 171MW installed capacity.
Position held	<b>Hydraulic &amp; Structural Engineer</b>
Activities performed	<ul style="list-style-type: none"> <li>• Performed structural analysis and designs for intake, HRT / Pressure Shaft, power house and other associated hydraulic structures.</li> </ul>

- Carried out river diversion works studies, hydraulic design (coffer dams) & their optimization.
- Design of flood protection measures such as guide banks, dykes, river training works etc.
- Prepared PFR and tender document
- Prepared of project cost estimates and BOQ.

Name of Assign.	CTP 3R , 15 ABC Project
Working Year	2016 to 2018
Location	Maharashtra, Gujrat, U.P, India
Client	DFCCIL
Main project features	The project comprises of embankments for railways
Position held	Structural/ Geotechnical Engineer
Activities performed	Stability analysis of Embankment, Seepage Analysis, Settlement Analysis & Liquefaction Analysis. <ul style="list-style-type: none"> <li>• Liaison with client regarding Lab and field testing Data.</li> </ul>

Name ofAssign.	Medigadda Barrage
Working Year	2016 to 2020 (Commissioned)
Location	Telangana
Client	Telangana Govt
Main project features	85no of gates barrage structure for irrigation.
Position held	<b>Structural/ Hydraulics Engineer</b>
Activities performed	Involved in Structural & Hydraulic Design of Barrage

Name ofAssign.	New Umtru Hydro Electric Project (40MW)
Working Year	2007 to 2010 (Commissioned)
Location	Meghalaya, India
Client	Meghalaya State Electricity Board
Main project features	The project envisaged the detailed design of hydro power structures, upgradation of existing weir for meeting peak demand.
Position held	<b>Hydraulics &amp; Structural Engineer</b>
Activities performed	<ul style="list-style-type: none"> <li>• Detailed design of project.</li> <li>• Prepared Reservoir Filling and O&amp;M manual related to civil works.</li> </ul>

Name ofAssign.	Punatasangchhu H E Project
Working Year	2015
Location	Bhutan
Client	Bhutan Govt
Main project features	Roller Compacted Concrete Dam
Position held	<b>Structural Engineer</b>

Activities performed	<ul style="list-style-type: none"> <li>Prepared Construction design and drawing of Dam Intake Block and Lifting Hook arrangement and Pile Erection</li> </ul>
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Projects– DPR/ Tender	
<b>Name of Assign.</b>	<b>Lachung, Badao, Rebby&amp; Para HEP in Arunachal Pradesh (200MW) &amp; 3 HEPs in Sikkim(100MW)</b>
Working Year	2011
Location	India
Client	CPL
Main project features	Prepared DPR for the projects-Hydraulic & Structural Design, Hydrology, Planning etc. Coordinating between site and HQ for carrying out survey, investigations etc.
Position held	<b>Hydraulics &amp; Structural Engineer</b>
Activities performed	<ul style="list-style-type: none"> <li>Preparation of DPR for all the projects and getting approval from central agencies.</li> </ul>

<b>Name of Assign.</b>	<b>Tehri PSP</b>
Working Year	2012
Location	India
Client	THDC
Main project features	U/S Tehri Dam and D/S Koteshwar Dam, 2no.of total 5km long headrace tunnel 8.5m dia, Surge shaft 10m dia with upper and lower horizontal gallery 8m wide and 8m height, 6m dia 4 no penstocks, underground Powerhouse.
Position held	<b>Structural Engineer</b>
Activities performed	<ul style="list-style-type: none"> <li>Tender Engineering</li> </ul>

<b>Name of Assign.</b>	<b>Jindal Pump House Project over river Mahanadi for Thermal Plant (2400MW)</b>
Working Year	2010
Location	Chattisgarh, India
Client	Jindal Power Ltd.
Main project features	The project comprises of detailed design of pumphouse for meeting thermal cooling plant requirement.
Position held	<b>Hydraulics &amp; Structural Engineer</b>
Activities performed	<ul style="list-style-type: none"> <li>Detailed design of project.</li> </ul>

<b>Name of Assign.</b>	<b>Ramganga Valley H.E.Project</b>
Working Year	2007 to 2010
Location	Ramganga Valley H.E.Project
Client	Infrastructure Leasing & Financial Services Limited
Main project features	The project envisages optimization of Ramganga Valley for evaluating hydro power projects and preparation of pre-feasibility reports and detailed project reports of identified HEPs.

Position held	<b>Structural Engineer</b>
Activities performed	<ul style="list-style-type: none"> <li>• Preparation of DPR for the project and getting approval from central agencies.</li> </ul>

<b>Name of Assign.</b>	<b>Amring H. E. Project</b>
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Working Year	2009 to 2010
Location	Assam, India
Client	APGCL
Main project features	The project comprises design of 50m high composite dam and a pit power house of 16.5 MW installed capacity.
Position held	<b>Hydraulics &amp; Structural Engineer</b>
Activities performed	<ul style="list-style-type: none"> <li>• Preparation of DPR for the project and getting approval from central agencies.</li> </ul>

<b>Name of Assign.</b>	<b>Bodhghat H.E. Project</b>
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Working Year	2007
Location	Chhattisgarh, India
Client	Chhattisgarh State Electricity Board
Main project features	The project comprises design of a high gravity dam and a powerhouse of 500MW installed capacity.
Position held	<b>Engineer (Projects /Design)</b>
Activities performed	<ul style="list-style-type: none"> <li>• Preparation of DPR for the project and getting approval from central agencies.</li> </ul>

<b>Name of Assign.</b>	<b>Vishnugad Pipalkoti H.E. Project</b>
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Working Year	2006 to 2007
Location	Uttarakhand, India
Client	THDC
Main project features	The project envisages design of run of river scheme with construction of a diversion dam of 65m height across Alaknanda River for power generation harnessing a gross head of 237 m, 13.4 km head race tunnel and a underground power house of 444MW installed capacity
Position held	<b>Hydraulics &amp; Structural Engineer</b>
Activities performed	<ul style="list-style-type: none"> <li>• Preparation of DPR for the project and getting approval from central agencies.</li> </ul>

<b>Name of Assign.</b>	<b>Bina H.E (40MW) and Multipurpose Project (Madia (24MW) and Dehra(10MW)), Madhya Pradesh</b>
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Working Year	2007
Location	Madhya Pradesh, India
Client	THDC
Main project features	The project comprises of designing high gravity dam and a power house of 40MW installed capacity.
Position held	<b>Engineer (Projects /Design)</b>
Activities performed	<ul style="list-style-type: none"> <li>• Preparation of DPR for the project and getting approval from central agencies.</li> </ul>

### Additional Projects – DPR/ Tender

- **Chitravathi PSP (500MW)** – GFRD, Deep Pit Power House & Steel Lined Penstock
- **Gandikota PSP (1000MW)** – ECRD, Under Ground Power House Complex & WCS with Surge Chamber
- **Lower Kopili Project (120MW)**—Concrete Gravity Dam 67m height, 7.0m circular HRT 3.6km length, 25m dia Surge Shaft, 800m length steel lined pressure shaft & Power House **(Now Operating Project)**
- **MAHSR** – Mumbai to Ahmedabad High speed train.
- **Zojila Tunnel** –In J&K road tunnel
- **Pakal Dul HEP**-Construction of two circular shaped TBM headrace tunnels of length 7.35km each. **(Now Operating Project)**
- **HATTA PSP**-Hydro Power Project in both generation & Pumping mode (2x125MW)
- **Al Wakra STP (Doha)**– 5 no of Underground shafts of 50m dia and 70m height for Screen shaft and Pump Shaft
- **Dubai Pump Storage and Infrastructure Project** –The project comprises of 60x70m area Pump Shaft with a height of 65m, Marine works like outfall structures and over flow channel and Auxiliary Buildings.
- **Rufiji HEP (2100 MW)**-The project comprises design review of 140m high arch dam 850m length, saddle dams17km length, around 1km long pressure shaft and power house of 2100MW installed capacity
- **Pinnapuram PSP (1200 MW)**—1.2km rockfill upperdam, 3.8km rockfill lower dam, Pressure Shaft 5no.7.5m dia 660m each & Pit Power House
- **Upper Karnali HEP (900 MW)** – Intake Tunnels feeding 4nos. 7.5m diameter horse shoe shaped intake tunnels of about 332 m, 2.9 Headrace Tunnel 2 nos. 10 m diameter, about 3 Km long each horse shoe shaped head race tunnels, Surge Shaft 2nos.25m diameter circular, 72m high restricted orifice type surge shafts, 4 circular pressure shafts of 6m, Surface Power House Complex.
- **Shahpurkandi PH project (3x33+8MW)**
- **Lakhwar multi purpose project**-204m high concrete gravity dam, intake, 300Mw (3x100MW) capacity underground Power House
- **Kwar HEP (540MW)** – Construction of Diversion Tunnel 9.5m dia horse shoe 685m length, Concrete Gravity Dam 101-109m ht, 4 no of Power Intake, 4 no of 5.65m dia Pressure Shafts max 182m length, Underground Power House & 2 no9.5mdiaTailraceTunnelsabout3kmlength.
- **KetuhrHEP (240MW)**
- **KhadakwaslaTunnel**- Survey, investigation, design and cost estimate of tunnel (27km, 6m dia circular) a right bank canal km 0.00to34.00
- **Nikachhu HEP (118MW)**



6. **Software:** STAAD PRO, AUTOCAD 2022, ROCSCIENCE PACKAGE, WHAMO, HAMMER, Global Mapper, RS2, HAMMER.

7. **Achievement:**

- Singoli Bhatwari Hydro Power Project Commissioned (Involved in the entire construction phase)
- Chitravathi PSP project (Tender preparation, Evaluation and award)
- Setup Design Team of around 10 designers and draftsperson for Hydro PSP Unit. Goal Setting, Task Monitoring & Evaluation of Team members.

8. **Language Skills:**

Language	Reading	Speaking	Writing
English	Excellent	Excellent	Excellent
Hindi	Excellent	Excellent	Excellent

9. **Countries Worked:** India, UAE, Qatar.

10. **Contact Information :** e-mail: [rudra.sankar.das@gmail.com](mailto:rudra.sankar.das@gmail.com);

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**Certification:**

I, the undersigned, certify to the best of my knowledge and belief that

- This CV correctly describes my qualifications and experience*
- I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.*