Stepping into

A Commemorative volume on the occasion of DVC Foundation Day 7th July, 2019

72 years

Damodar Valley Corporation
Powering India Empowering the Valley
Our Mandate & Core Values

**Economic Development:**
- Generation (hydro-electric & thermal), transmission and distribution of electricity
- Irrigation & Water Supply

**Environmental Protection:**
- Flood control
- Afforestation and control of soil erosion in the Damodar Valley

**Social Development:**
- Public health and the agricultural, industrial, economic and general well being in the Damodar Valley region

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**हमारे युगलांगी मूल्य**
- सत्यता, ईमानदारी, पारंपरिक एवं उच्चवर्धता हमारे दीर्घ की प्रवृत्ति को परिभाषित और हमारे व्यवहार को संचालित करते है।
- हम एक दीर्घ के रूप में अपने ग्राहक की सर्वोत्तम सेवा के लिए प्रतिबद्ध है।
- अपने कर्मचारियों, ग्राहकों एवं भारत के लोगों की संरक्षित हमारे लिए सर्वोत्तम है।

**Our Core Values**

Integrity, Honesty, Transparency & Accountability define our Teams’ Attitude & drive our behaviour

We are Committed as a Team to provide best Service to our Customers

Safety of our Employees, Customers and People of India is paramount to us
Chairman’s Message

It is a matter of pride that Damodar Valley Corporation (DVC) is completing 71 years of its incorporation on July 7, 2019. DVC is independent India’s first multipurpose river valley project, contributing to nation building since 1948. This commemorative volume is being brought out, on this occasion, to showcase glimpses of our progress and milestones as an organization.

DVC has played a key role in the industrial growth in its command area of 24,235 sq. kms across States. It has also fulfilled its multiple objectives like flood control of the Damodar river and its tributaries, community development through CSR activities in 629 villages in the States of Jharkhand and West Bengal, promoting agriculture in the region and creating employment opportunities.

Since its inception, DVC is recognized as a pioneer project, setting an example of an integrated inter-state programme for other river valley projects in the country to emulate.

Seven decades on, DVC continues to strive for excellence.

Some of the major achievements of Team DVC in 2018-19 are:

- Highest-ever Thermal Generation of 36677 MU (exceeding the CEA target of 35589 MU)
- For the first time, DVC won a project through international competitive bidding (ICB), for supplying 300 MW Power to the People's Republic of Bangladesh both in short term and long-term mode
- DVC received Association of Energy Engineers (AEE) "Institutional Energy Management Award-2018" for Asia Sub-continent Region

As we step into the 72nd year of our existence, our priorities remain to increase generation through better power station O&M and fuel management, start coal mining operations, enter into renewables, expand our consumer base, improve commercial focus etc., and more importantly, focus on the learning & development and growth of the employees.

Let us renew our commitment to transform DVC into one of the best organizations in the country.

I extend my best wishes to every member of Team DVC.

Gurdeep Singh
River Damodar which is 592 km long, is one of the important rivers flowing through the states of Jharkhand and West Bengal. Needless to mention, Damodar and its tributaries attracted the populace around its banks over the years. However, the river brought devastating destruction and havoc with severe floods. It needed taming and with the setting up of the Damodar Valley Corporation, it not only checked the uncontrolled river but also brought fertility to the basin area thus making it agriculturally rich. And as a natural corollary with the onset of industrialisation, a large number of industries like steel, coal mining, heavy industries, cement, power etc. have gradually evolved.

Damodar originates from Chota Nagpur Plateau and flows through important townships like Bokaro in Jharkhand and Asansol, Raniganj and Durgapur in West Bengal.

The Damodar River Basin is a sub-basin and part of the Ganga River Basin spreading over an area of about 24,235 sq. km in the states of Jharkhand and West Bengal. The basin extends over Twelve districts of Jharkhand viz., Palamau, Hazaribagh, Giridih, Dhanbad, Koderma, Chatra, Bokaro, Ramgarh, Lathehar, Jamtara and part of Ranchi and six districts of West Bengal, viz., Purulia, Bankura, Burdwan (East and West), Hooghly and Howrah. The distinctive feature of the basin is that around three-fourth of its area representing the upper catchment falls in Jharkhand, while the low-lying flood plains entirely lie in West Bengal. The region is richly endowed with varied mineral resources. Consequently, the region supports several economic activities related to mining and mine-based industries.

Physiography

The Damodar River Basin has varying landforms such as plateaus, hills, uplands and plains. Physiographically, four prominent divisions constitute entire basin with different lithology, slope, soil and vegetation.

Geology

The geology of the basin is spelt out by different types of rocks ranging from Archaean to recent age with economic deposits like coal and mica.

Drainage System

Damodar and its principal tributary, the river Barakar forms the core drainage system of the basin. This riverine system drains about 23,370.98 sq. km. area of Jharkhand and West Bengal states. The Damodar in its upper reaches is known as the Deonad, and originates in Khamarpet hill range (1,062 m) near Chandwa in Palamau district. The Barakar river basin has an area of 7026 sq. km. It rises from the Koderma plateau and runs for a long distance to meet the Damodar near Dighergarh. Damodar, which ultimately drains out water in the Hooghly opposite to Falta.
About the Valley

Climate

Damodar river basin experiences tropical climate with the hottest summer and the coldest winter. The month of May is the peak of summer season with an average maximum temperature of 43°C and minimum of 30°C, while December and January are the coldest months. Annual rainfall over the basin varies between 765 and 1607 mm with an average of 1200 mm of which 80% occurs during the monsoon season.

Soil

In upper and middle basin of Jharkhand region, the soil has been grouped into major red and yellow loam sedimentary types.

Vegetation

The valley area is a part of biodiversity rich regions of India because of its diverse physiographic and climatic conditions. Tropical Dry Deciduous Forest, Moist Deciduous Forest, Dry Peninsular Forest and Dry Mixed Deciduous Forest are the main type of Forest vegetation in valley area. Among the important trees in Jharkhand are sal, bamboo, mango, jackfruit, kendu, katha, gambhar, jamun, harhe, mahua, shisham, sagwan, baheda, etc.

Minerals

Damodar basin has the most important mineral belts of India accounting for about 40 to 100 per cent of the national production of various minerals. In certain minerals it holds a key position. It produces nearly 100 per cent of India’s copper and apatite (till recently), 95 per cent of kyanite, more than 50 per cent of coal, mica, bauxite and china clay and about 40 per cent of iron ore. Chotanagpur plateau contains 80 per cent of India’s known deposits of coal and nearly 100 per cent of coking coal.

People

The vast majority of the people live in villages. Compact or clustered villages are usually found in the plains, while dispersed rural settlements are characteristic of the valley area. The people of valley area are noted for their ethnicity which is contributed by at least 30 different groups of tribal community. Aboriginal tribes are concentrated in this area. Santhal, Oraon, Munda, and Ho Birhor, Korwa, Hill Kharia Birhor, Korwa, Hill Kharia Mahali, Lohra, Karmali, Chik Baraikare the principal tribes and together constitute four-fifths of the total tribal population.

Economy

The Economy of valley people depends on mineral resources, industries, agricultural, and tourism sectors.
About the Valley

Culture of the Valley
The vibrant cultural of the Valley area is deeply rooted and has a rich tradition. Artefacts as old as thousand years have been found in the valley which indicate the people in the valley have been residing since long. In the 'Mangal-Kavya' of Bengal (Manasa Mangal etc.) reference and stories of Damodar River and its people are found.

With Damodar water causing only flood and destruction some poets composed the famous limerick "DHEYE ELO DAMODAR".

Folk Songs viz. Jhumoor, Leto, Patageets, songs known as Jawa, Abir Gaan of Badhna Parab, Karma Puja, Paika, Hool Utsav, Sohrai, Sarhul, Tusu Gaan, Makar Festival songs are still pursued by the original inhabitants in the upper valley. Chat Utsav and Holi are celebrated across the valley with much fanfare and enthusiasm.

In the lower valley, Kirtan, Palagan, Bhadu Utsav, Kabi-ladai, Charja Gan and the famous Chou-nach of Purulia and adjoining places are the age-old cultural activities which the inhabitants still continue to follow and celebrate.

Not to mention of Durga Puja which is also a grand festival around the Valley.

Dokra, pottery, terracotta, dye-making (from flowers of Palash, Ashok, Shimul etc.), silk-worm cultivation, artefacts making from Bamboo or cane, shola arts are some of the artistic traits, the locals of Damodar Valley region pursue beside others.

The iconic Bankura Ghora, Chou mask and Baluchori Sharees are associated with Damodar Valley.
River Damodar was known for its destructive power which caused frequent floods in the Damodar Valley region of India. The devastating floods of 1938 & 1943 created a dire need for a integrated multipurpose river valley project. Modelled upon the Tennessee Valley Authority (TVA) of the USA. DVC was established in 1948 by an Act of the Constituent Assembly of India owned by Govt. of India, Govt. of Jharkhand (erstwhile, Bihar) and Govt. of West Bengal with the objective of carrying out, in the 24,235 sq. Km. area of the Damodar Valley, activities relating to flood control, irrigation, socio-economic development, education, health, afforestation, power generation & transmission and distribution of electricity.
Since July 7th, 1948, the day DVC started its journey, it has been passing through golden moments as well as critical situations, and ultimately stepping into 72nd year of its existence, fulfilling the mammoth task of nation building, through its contribution towards taming of river Damodar, industrial growth and prosperity, agricultural bountifulness and general well being of the people of Damodar Valley.

1948
Damodar Valley Corporation came into existence on July 7th, 1948

1949
The Soil Conservation Department was established in 1949 to deal with the problem of conserving the soil of the entire upper catchment area

1951
DVC first started its mining activities in 1951 by acquiring the coal mines at Bermo from Indian Railway to meet the coal requirements of Bokaro 'A' Plant

1953
- Tilaiya Dam (1953);
- Hydel Power plant: Unit-1 in Feb, and Unit-2 July 1953

1955
- Konar Dam;
- Durgapur Barrage

1957-58
- Maithan Dam
- Hydel Power Unit-1 in Oct' 57;
- Unit-2 in Mar' 58;
- Unit-3 in Dec' 58
In the initial phase, India had to depend on outside technologies. Hence TG sets of GE (USA) and Boilers of MAN (Germany), CE (USA) and B&W (UK) were installed in the old units of Boakro-A, Durgapur and Chandrapura TPSs. Later, with the indigenous technological advancement and advent of heavy engineering industries, BHEL units were installed starting with 120 MW Units at CTPS followed by 210 MW units at DTPS, BTPS-B and MTPS. From 10th plan onwards, DVC went into installing units of 250 MW and subsequently 500 MW at its various brown/green field projects. In RTPS, 600 MW units have been installed by SEC, China.

With the passage of time, considering stricter environmental norms and economy in power generation, one by one age-old inefficient units had to be retired starting from DTPS Unit#1&2, Bokaro-A Units in the late 80s to early 90s. Similarly 2016 onwards, further retirement action had to be taken up by decommissioning of 130/140MW units and some 210 MW units.

1959
Panchet Dam
Hydel Power
Unit-1 Dec’59;

1964-68
Chandrapura TPS
Unit-1 Oct’64;
Unit-2 May’65;
Unit-3 July’68

1966-82
Durgapur TPS
Unit-3 Dec’66;
Unit-4 Sep’82

1987-94
Bokaro ‘B’ TPS
Unit-1 Mar’87;
Unit-2 Dec’91;
Unit-3 Apr’94
Panchet Hydel
Unit-2 Mar’91

2011-12
Mejia TPS Unit-7 Aug’11;
Unit-8 Aug’12;
Durgapur Steel TPS
Unit-1 May’12;
CTPS Unit-8 July’11;
CTPS Unit-7 Nov’11

1997-2008
Mejia TPS
Unit-1 Dec' 97;
Unit-2 Mar' 99;
Unit-3 Sep' 99;
Unit-4 Feb' 05;
Unit-5 Feb' 08;
Unit-6 Sep' 08

2013-14
Koderma TPS
Unit-1 July’13;
Unit-2 Jun’14;
DSTPS Unit II
Mar’13

2016-17
Raghubirthpur TPS
Phase I
Unit-1 & 2 Mar’16;
BTPS-A Feb’17

2018-19
First Cross Border supply of Power to the People’s Republic of Bangladesh
## Generation Assets

<table>
<thead>
<tr>
<th>Installed Capacity</th>
<th>Jharkhand</th>
<th>West Bengal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydel</td>
<td>Panchet : 80 MW</td>
<td>Maithon : 63.2 MW</td>
<td>147.2 MW</td>
</tr>
<tr>
<td></td>
<td>Tilaiya : 4 MW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermal</td>
<td>Bokaro : 710 MW</td>
<td>Durgapur : 210 MW</td>
<td>7090 MW</td>
</tr>
<tr>
<td></td>
<td>Chandrapura : 630 MW</td>
<td>Durgapur Steel : 1000 MW</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Koderma : 1000 MW</td>
<td>Mejia : 2340 MW</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Raghunathpur : 1200 MW</td>
<td></td>
</tr>
<tr>
<td>JVs</td>
<td>DVC-SAIL : 338 MW</td>
<td></td>
<td>1388 MW</td>
</tr>
<tr>
<td></td>
<td>TATA Power-DVC : 1050 MW</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Damodar Valley Corporation operates 4 dams with a flood moderation capacity of 6.5 lakh to 1.25 lakh cubic feet/secs. The Damodar Valley system has a network of 2500 kms which has created an irrigation potential of 4 lakh hectares.

<table>
<thead>
<tr>
<th>Dam</th>
<th>Inception</th>
<th>State</th>
<th>On River</th>
<th>Length</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tilaiya</td>
<td>1953</td>
<td>Jharkhand</td>
<td>Barakar</td>
<td>366 metres</td>
<td>4 MW</td>
</tr>
<tr>
<td>Konar</td>
<td>1955</td>
<td></td>
<td>Konar</td>
<td>4535 metres</td>
<td>–</td>
</tr>
<tr>
<td>Maithon</td>
<td>1957</td>
<td>Jharkhand/West Bengal</td>
<td>Barakar</td>
<td>4860 metres</td>
<td>63.2 MW</td>
</tr>
<tr>
<td>Panchet</td>
<td>1959</td>
<td></td>
<td>Damodar</td>
<td>6777 metres</td>
<td>80 MW</td>
</tr>
</tbody>
</table>
Transmission & Distribution Infrastructure

7547 Ckms of Transmission and Distribution Lines

<table>
<thead>
<tr>
<th>Voltage (KV)</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>1533</td>
</tr>
<tr>
<td>132</td>
<td>3382</td>
</tr>
<tr>
<td>220</td>
<td>2153</td>
</tr>
<tr>
<td>400</td>
<td>478</td>
</tr>
</tbody>
</table>

61 Substations

<table>
<thead>
<tr>
<th>Voltage (KV)</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>13</td>
</tr>
<tr>
<td>132</td>
<td>28</td>
</tr>
<tr>
<td>220</td>
<td>15</td>
</tr>
<tr>
<td>400</td>
<td>5</td>
</tr>
</tbody>
</table>
Captive Coal Blocks

Tubed Coal Block (Jharkhand)

Ministry of Coal allotted Tubed Coal Block to DVC on 07.10.2016 for undertaking pre-mining and mining activities and end use of coal for its Mejia TPS Unit no.# 7 & 8 and Chandrapura TPS Unit No.# 8. DVC appointed M/s Develecto Mining Limited (a SPV formed by the consortium comprising of SICAL, AMPL & GCL) as MDO for undertaking pre-mining and mining activities of the Tubed Coal Block. The Mine has a Geological Reserve of 190 million tonnes and will have peak production capacity of 6 Million tonnes per annum.

Khagra Joydev Coal Block (West Bengal)

Ministry of Coal, GOI allotted Khagra Joydev coal mine to DVC w.e.f. 01.04.2015 for undertaking pre-mining and mining activities and end use of coal for its Mejia TPS Unit no. 7 & 8. DVC appointed M/s Khagra Joydev Resources Pvt. Ltd (a SPV, formed by consortium comprising of GDCL, AMPL & GCL) as Mine Developer and Operator (MDO) for undertaking pre-mining and mining activities of the Khagra Joydev Coal Block. The Mine has a Geological Reserve of 178 Million tonnes and will have peak production capacity of 3 Million tonnes per annum.
Committed to Customers

DVC supplies bulk power to more than 7 states in India and to hundreds of customers in the Damodar Valley area. The USP of our services is reliability affordability & accessibility.

Most of our customers have been with us for a very long time and area happy with our services. We also supply power to major industries such as Steel Authority of India, Durgapur Steel, Coal India, TATA Steel and Indian Railways. DVC started its first cross Border supply of Power to the People's Republic of Bangladesh. Our tariff is also one of the lowest in India.

Consultancy Services (DVC Maithon)

- Central Testing Circle (CTC) : Third Party Equipment Testing / Commissioning / Investigation & Analysis
- Central Testing Division (CTD) and Design Division: Testing of Civil Engineering materials such as cement, brick, concrete, bitumen, tar felt etc. including soil testing. The Design Division is well equipped and engaged in planning and design works in the field of Civil Engineering.
Notable Achievements

- In FY 2018-19, DVC achieved highest ever thermal generation of 36677 MU exceeding CEA target (35589 MU) by 1088 MU

- DVC also achieved lowest ever Auxiliary Power Consumption (APC) of 6.97% in FY 2018-19

- Achieved PLF of 59.1% 2018-19 which is highest in last 4 years

- DVC plants namely Koderma TPS (April-18, May-18) & Bokaro-A TPS (April-18) were ranked amongst the top three Central Sector TPS in terms of highest PLF in the country

- NABL accreditation achieved for 6 out of 7 fuel laboratories in DVC plants

- DVC achieved Highest ever utilization of 33.14 LMT Dry Fly Ash in FY 2018-19 generating a revenue of Rs. 17.61 Crore. Ash Utilization by DVC in FY 2018-19 is 69.81% which is much higher compared to many utilities

- For the first time in its history, DVC won contract through the ICB route for supplying 300 MW power to Bangladesh both in short term (Contractual schedule from June 2018 to December 2019) and long term (Contractual schedule from January 2020 to May 2033) mode. 300 MW Power Supply to Bangladesh commenced from 10th Sep 2018

- In January 2019, DVC signed a PPA with West Bengal State Electricity Distribution Company Limited (WBSEDCL) for supply of 204 MW Power on Mid Term basis from Raghunathpur TPS as per prevalent rate of CERC

- In October 2018, DVC commissioned Floating solar (25 KWp) at reservoir inside plant premises of Mejia TPS in Bankura district. Earlier DVC commissioned Solar Roof-top Project (53 KWp) at DVC Towers (DVC HQ in Kolkata)
Notable Achievements

- Under the Digital India Mission of GoI, DVC developed an android app 'DVC Gen Trail' for tracking the generation parameters of DVC power stations. The app is available in Google Play.

- The app was launched by Shri R.K.Singh, the Hon'ble Minister of State (IC) Power and New & Renewable Energy, GOI on 71st Foundation Day of DVC on 07.07.2018.

- DVC launched a consumer mobile app named 'DVC ConServe' through which DVC consumers can access monthly bills, register complaints and be informed of load restriction / power interruption in real time.

- In September 2018, DVC received Rajbhasha Kirti Purashkar (Second Prize) from the Hon'ble Vice President of India at Vigyan Bhawan, New Delhi for implementation of Official Language for the year 2017-18.

- DVC received international Association of Energy Engineer's (AEE's) Asia Subcontinent Region Institutional Energy Management Award for the year 2018 for its contribution towards developing, organizing and managing Energy Management Programs.

- In September 2018, DVC received prestigious SKOCH CSR GOLD Award 2018 for its remarkable contribution in 'Development of Villages through Social Mobilization and Integrated Natural Resource Management'.
CSR is our DNA since 1948. Socio-economic development activities in the DVC command area has been synonymous with DVC. Our CSR activities include education, infrastructure development, healthcare, soil conservation, afforestation, vocational training, pisciculture and job creation through income generating activities.
Corporate Social Responsibility

These programmes cover 629 villages of Jharkhand and West Bengal, 20,000 students are enrolled in our schools, our hospitals and clinics treat over 2 lakh patients every year, we support 6 Industrial Training Institutes, constructed 16,000 check dams and afforested around 4 lakh hectares. We have carried out major infrastructure developmental works like building roads, tube wells, water supply schemes, household and school toilets, primary schools and community centres for many years.
SERENITY OF THE DAMODAR VALLEY – A travellers paradise

A Chinese proverb inspires 'walk a mile and you have read a thousand books'. For centuries man has been a wanderer at heart. And this “wanderlust” has taken him to lands far and near.

With the advent of Damodar Valley Corporation, its catchment and command area are repellete with serene landscapes have drawn tourists to its fold. From its picturesque dams, motorable roads, its manicured gardens, variety of flora and fauna have all added to the beauty that attracts a multitude of tourists every year. Adding to the plethora of tourist attractions are Majumdar Niwas situated on an island at the Maithon Reservoir, Garpanchakot, Pareshnath, Joychandipahar, Rajrappa, Panchet, Tiliya, Konar Dam and other tourist places.
राजभाषा
हिंदी सलाहकार समिति की बैठक
अप्रैल, 2018
माननीय केंद्रीय विचुर मंत्री ने 11 अप्रैल, 2018 को नई दिल्ली में आयोजित हिंदी सलाहकार समिति की बैठक के दौरान दामोदर घाटी निगम द्वारा प्रकाशित "डीवीसी पर कविताएं" का विमोचन किया।

श्री केशरी नाथ त्रिपाठी, माननीय राज्यपाल, पश्चिम बंगाल राज्य अधिकारी कवि सम्मेलन के अवसर पर स्वर्णित कविता पाठ करते हुए।

हिंदी पत्रिका 2018 के अवसर पर प्रमुख गायिका श्रीमती आरती मुखर्जी का स्वागत करते श्री पी. के मुख्याध्यक्ष, सदस्य सचिव महेद्व।

हिंदी पत्रिका 2018 के उद्घाटन समारोह में मेचपर उपस्थित...मूर्ति संतर्किता अधिकारी एवं अन्य अधिकारीय।
Awards & Accolades

Rajbhasa Kirti Award

Member-Secretary, DVC received the Association of Energy Engineers Asia Subcontinent Region Institutional Energy Management Award 2018 from Shri Sovandeb Chattopadhyay, Hon'ble Minister of Power & Non Conventional Energy, GoWB on 14.12.2018 at IISWBM Kolkata

SKOCH Gold Award for CSR project

DVC received best Government Pavilion Award of IITF organised by BNCCI, Kolkata

Award to DVC as a “Recognition for Excellence in internal Audit function in Government Sector” by The Institute of Internal Auditors of India. Shri S. Halder, Member (Finance) receives the award on behalf of DVC
Our Initiatives

Vigilance Awareness Week - 2018

Swachhta Pakhwada

World Environment Day

Swachhta Pakhwada

International Women’s Day 2019
A bird’s eyview of the River Damodar at Rajrappa, Jharkhand