Sharavathi fire: Govt to form inquiry panel

SHIVAMOGGA: The State government will constitute a panel comprising senior officers from premier power companies to probe into the fire mishap at the Sharavathi hydroelectric plant near Jog Falls in Sagar taluk on Thursday.

The team will comprise officers from the Central Power Research Institute (CRP). Karnataka Power Corporation Limited (KPCL). Karnataka Power Transmission Corporation Limited (KPTCL) and retired officials. Energy Minister 'D K Shiyakumar said here on Friday.

Speaking to media persons after visiting the plant, the mmister said that the unit, which was contributing 23 per cent of power had come to a standatill due to the fire, thus bring-



The control room of Sharavathi hydroelectric plant at Jog Falls in Shivamogga district which was damaged in the fire on Thursday. Second

ing down the power generation by 750-800 MW per day.

According to sources, the loss incurred discretified mishaucould be around Rs 100 crore. The immister said that the cost of production of power was was the lowest at Sharayathi plant. in the whole of South Asia. Therefore, the loss due to the fire cannot be compensated by any means as purchasing power from other sources is cost prohibitive.

"The power cables at the plant have been reduced to ash-

es. We have decided to modernise all the ten units of the plant with advanced technology taking safety measures on top priority and keeping next 100 years in view," he added.

The minister stated that the government has taken all measures to supply power to the entire State without any interruptions during summer. It has decided to purchase power from the Centre at Rs 4.50 per unit and from other sources at Rs 5.80 per unit. The power requirement of domestic and commercial consumers, including industries and farmers, will be met, he stated.

Shivakumar said other power generation units such as Linganamakki, Gerusoppa and Mahatma Gandhi will be utilised to their maximum capacity to ensure that there was

no shortage of power. He sai the Raichur Thermal Powe Station (RTPS) was also ger erating power to its capacity However, water from river Ki ishna was not reaching th RTPS as farmers were drawin water mid-way and suitabl measures had been taken t check the practice.

Reward announced

Energy Minister D K Shivaki mar has announced a cash priz of Rs one lakh each to the fou daily wage workers - Rami Mukhtiar, Chidambar Jain an Shamiulla - who risked thei lives to rescue three engineer: Krishna Bhat, Balachandra an Joevelyn, trapped inside the plant during the mishap. The will also be recommended for the Shourya award, he said. DH News Service

Fire Won't Affect Power Situation: Minister

Generation in 3 other units will be increased to ensure supply

Express News Service

Shivamogga/Bengahuru: The fire at the Sharavath power generating station on Wednesday has wiped off around 800 MW that was being added to the state's kitty of power.

kitty of power.
The cost of production of power was also the cheapest at 24 paise per unit and the state will have to compensate for this loss by upping power generation from other hydel sources and also purchasing power from the Central grid at a higher price.

at a higher price.
Assuring that there would no shortage in power supply to both domestic and industrial consumers, Energy Minister D K Shivakumar said that power generation will be increased in Linguia makki, Gerusoppa and Mahatma Gandhi power generation units.

"We will utilise these stations to their optimum capacity by diverting the water to these units," he said.

The minister asserted that the government had taken all measures to provide power to the entire state in the coming months by purchasing power from entiral government (₹4.50 paise per unit), exchange and from other sources at ₹5.80 per unit. The minister was addressing the media after a visit to the Sharavathi generating station on Friday afternoon along with Energy Department officials.

Speaking about the loss

RAICHUR POWER GENERATION IMPROVES

With the functioning of Unit 7, generation by the Raichur Thermal Power Station has considerably increased from Finday. Owing to paucity of water from the Krishna river, the generation in Unit 1, 7 and 8 were stopped from February 17. Now that water has been released from the Narrayanpur dam to the river, RTPS authorities are able to restart Unit 7. If the situation improves, Unit 8 will also be put to service, the authorities said. The generation was around 500 MW since last three days.

incurred, he said, "This is an accident. We cannot make up for this loss from elsewhere. It certainly costs a huge amount to purchase power from other sources. We have to bear with it, it is inevitable."

As on Friday, the actual

As on Friday, the actual consumption across the state was 193.96 MU (Mega

Meeting this demand were major hydel power stations contributing 15:60 MU, minor hydel stations contribuing 3.81 MU, thermal stations generating about 37:03 MU, Central generating stations contributing about 46:95 MU and non-conventional energy and other

sources contributing about 90.57 MU.

Committee to be Formed

The government will constitute a committee of high-level officers from CPRI, KPCL, KPICL and retired officials to probe into the fire at the Sharavathi Hydro Power Generation unit (SHPG) in Jog on Exhaura; Exhauration

February 18. Speaking about the incident, Shivakumar said the fire broke out due to short circuit around 4,30 pm on Welnesday due to single phase-to-earth fault in the Sharavathi-Talaguppa-3 220 KV line.

At this juncture, a sudden power flow of 21,000 kilo amps ied to a fire breaking out in a cable duct situated in second floor of the unit. All the nine units were immediately shut down.

The entire control room was gutted and even the cable duct room was burnt to ash.

However, there were no damages to switch yard, CT, PT and isolators.

Entire units in the Sharavathi itation will be modernised with advanced technology with top priority to safety measures and keeping the next 100 years in view, said Shivakumar. He said every switch, line, generator and all electrical equipment will be tested before restructuring and renovating the outire unit.



Sharavathi Hydel Unit Comes to a Halt

by Ramackandra Y Gunari

Shivamogga: Sharavathi Hydro Power Generation came to a halt on the evening of February 18, after a gap of 52 years, following the fire. All the 10 turbines in the unit have come to a standstill racking it a fallent zone.

Alt the 10 turbines in the unit have come to a standstill making it a silent zone. The entire third floor (control unit) was charred with a pungent odour of burnt cable making it hard for people to over. Sharavathi Hydel Power

Sharavathi Hydel Power Generation unit consists of three floors and the first floor is an A/M Zone and entry zone. Second floor has cable ducts like a blood circulation unit in a human body and the third (last) floor is a heart control unit where entire power generation unit is

Repair to be Speeded up

Two towers (1 and 2) of 110 KV capacity on JSTL collapsed during last rainy season and its repair work is moving at a snair's pace for the past eight months. Sources say it would require at least two months if they take up this work on priority. Otherwise the authorities can think of using alternative UG cable. But laying of UG cables requires more funds. There is no other option if the authorities go for optimum production of 139 mega watt per day from Mahatma Gandhi Power House (MGPH) unit. Presently MGPG unit is generating 40 mega watt per day.

controlled right from operating the generators to controlling power generation and other operations. The control room consist-

The control room consisting of switches, panel boards, monitoring screens and operating levers has turned to asbes. Only hard materials like iron plates and remains of panel board can be seen hanging from the roof

The Rescue Effort

Fire brigade from Sagar. Sorab, Siddapura and Shivamogga were pressed into service to douse the fire that engulfed entire building and took about four hours from 5 pm to 9.30 pm on Wednesday. Chief engineer of KPC Shivaji told media persons that the fire was first noticed in A/M zone in the ground floor and it was doused. After sometime fire broke out in the cable duct of the second floor, When the fire was noticed in the second floor.

eergency sirens wereblown. Three engineers, who were working in the control room were alerted, and they immediately put off all the switches and rushed to the top floor. However the wind blow engulfed the roof top and made it difficult for executive engineer Krishna Benhur and assistant engineer Joyaline Fernandes to leave. However, they were asked to reach the other end of the roof and were rescued by four contract labourers.

Workers save engineers from death

Energy minister DK Shivakumar announces ₹25,000 to each of the four brave men who climbed duct pipes to get to terrace of control unit and rescue the trapped KPCL engineers



On being informed about the valiant but rescuing the three assistant executive engineers on duty in the opiniod and at the time of tragedy. Sinc alman immediately amounced the cold reward. The courageous act of the hori was applicated by all including the minister.

"We are thankful to these employees to treasuring the traged engineers and other iRFCL employees. The tragedy should not have engineers and other iRFCL employees. The tragedy should not have engineers and all ris not cust the entire slepatiment, but the entire state that has suifcred a problem because it will take several days to restor, the unit.

The minister said a high-level committee would be constituted to look into the insident and determine the exact cause of the fire. We easy fection in military in the state of the fire who extended the state of the fire who extended the state of the fire of completely destroy the object of the state of the fire to completely destroy who extended that a short existing at the fire to completely destroy who extended that damage, of the call minimal at the selection and the state of the fire were are being assessed.

The reservoir had to prove a slope with a fire of the control advised that a short of the control of the fire of the control of the control of the complete of the control of the contr

But. No & 50/05/8018 The Winda Delay in resumption of generation of cheap power will put in hugh burden in State exchequer's

IT MAY TAKE UP TO 4 MONTHS TO RESTART SHARAVATHI

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Authorities tap hydel reserves to tackle emergency

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DIS MEASURES AND BETANED TO US ABOVEWNALD INVOICES AND AURINOMISTRIES AS WAS AS FOR HOMESTE, USE OF THE MANING PAWERTRAM

Panel to probe fire at Sharavathy station

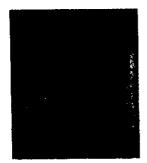
DC CORRESPONDENT SHIVAMOGGA, FEB. 19

A committee made up of retired engineers of the Karnataka Power Transmission Ltd and Central Power Research Institute will look into the fire which reduced vital installations of the Sharavathy generating station at Jog Falls to ashes Thursday evening and also assess the loss suffered by the accident.

Announcing this, here, Energy Minister, D.K.Shivakumar, who visited the power station on Friday, said it would be checked thoroughly for defects and be overhauled with the latest technology.

He also announced a reward of Rs one lakh for the four housekeeping staff, who saved the lives of three engineers and prevented further damage to the plant. Noting that Sharavathy generating station was the heart of the 'Karnataka Power Corporation Ltd, the minister said the state would now have to buy power from outside to make up for the shortfall.

"The state has lost 800 MW of power produced at this station due to the fire. So the government will buy power from outside to meet the demand from the agriculture,



industrial and domestic sectors," he assured.

According to the official report, the fire broke out at around 4.30 pm on Thursday after a single phase- to earth fault at the 220kv capacity Sharavathy-Talguppa 3-ST 3 caused 21.6 kilo amps of power to flow back towards the earthing panel.

Nine units were immediately shut down and three engineers. who were in the control room, were rescued safely with help of four housekeeping staff. The police and the fire brigade were alerted and the fire was doused in a few hours. While the fire gutted the relay protection scheme and cable duct, the main equipment such as power generator, transformer. switch yard, breakers. and isolators were not damaged thanks to the timely action taken by the labourers, contract workers and officials at the spot, the report said.

The state has lost 800 MW of power produced at Sharavathy station due to the fire. So the government will buy power from cutside to meet the demand

- D.K.Shivakumar, Energy Minister RTPS prepares to address water scarcity as summer peaks

KUMAR BURADIKATTI RAICHUR

The water shortage on Wednesday that led to a sudden shutdown of unit-7 and unit-8 of Raichur Thermal Power Station (RTPS) and reduced the generation by remaining units has left RTPS authorities worried on what will be in store as summer progresses. They are now scrambling to ensure uninterrupted water supply to the power station.

Water from Basava Sagar Reservoir - built across the Krishna at Raichur-Yadgir district border near Narayanpur - has been released to the river for filling Googal barrage near Googal village. about 52 km from the reservoir. The idea is to maintain minimum storage of 1 tmcft water in the Googal barrage so that all eight RTPS units (with total installed capacity of 1720 MW) can run round the clock for the next three months.

Sources in RTPS say Wednesday's Jevelopments were unexpected. Considering the possibility of water shortage, the RTPS authoristies in coordination with the officials of Krishna Bhagya. Jala Nigam Ltd. (KBINL) had got 1.000 cusees of water released from the Basava Sagar Reservoir from February 10. However, the water did not reach Googal barrage on time owing to huge pits created by massive sand extraction in the riverbed. Illegal drawing of water for unauthorised irrigation in the upper reaches of the river also played a role in the delay. This forced them to shut two units and reduce power generation in the remaining units using just 40 cusecs of water as against the required 100 cusecs.

At present, Basava Sagar Reservoir holds about 9 tm-



The Raichur Thermal Power Station requires 1.3 tmcft of water for running its 8 units till June 10.

oft live storage. The RTPS requires about 1.3 tmcft of water (at the rate of about 100 cusecs) for running its eight units till June 10, by which monsoon is expected to set in. The authorities feel that there should be no water problem if storage of one (mcft is ensured in the cloogal barrage for the next few months.

"KBJNL authorities told us that they would provide our quota of water for running RTPS. I hope there will be no water problems," C. Venugopal, executive director of RTPS told The Hindu.

Of the two Units, unit-7, with an installed capacity of 210 MW, resumed operation on Friday, and unit-8, with an installed capacity of 250 MW, is taken up for annual overhauling. Unit-1, which has also been taken up for overhauling, is expected to have resumed operation by Friday evening.

TH

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ILLEGAL SAND EXTRACTION, IRRIGATION

The huge pits caused by massive sand extraction all along the river in the 52-km-stretch between Basava Sagar Reservoir near Narayanpur, and Googal barrage and also in the 28-km-stretch between Googal barrage and RTPS at Shaktinagar, have become a cause of concern for RTPS.

In the absence of these massive pits earlier, water discharged from the reservoir would reach RTPS within 30 hours flowing at the speed of km per hour in summer. Now the flow has slowed down by 100 per cent (at half-a-km per hour) as water fills these pits before flowing further. Once the pits are filled, the speed picks up for further releases.

Illegal drawing of water from the river by farmers for irrigation of unauthorised lands is another issue that needs to be addressed.

Earlier, 70 to 80 per cent of water released from the reservoir used to reach Googal barrage. Now, as the number of illegal irrigation pumpsets along the river banks have increased, only half of the water reaches the barrage.

Low solar tariffs susceptible to cost risks'

They hit a historic low of Rs 4.34 per unit in January after a bid for a 70 MW project in Rajasthan

TLA SHARAH RACHASAN

Low tariff bids for recent solar projects could prove risky for de-velopers as any slight changes in costs could dent operating mar-gins, Tata Power Renewable Ener-gy CEO Rahul Shah told *The Hin*du in an interview

"A lot of industry people were surprised by the kind of bidding that developers have done. They must have good reasons for it. But I think those bids have very tight as sumptions and if any one assump-tion moves adversely even a little

before the commissioning of the project, then it could be a very risky project." Mr. shah said. For example, he explained, if developers are banking on the fact that module prices have been falling and the said of the project of the said of the s ing and so will fall in the future then this could work

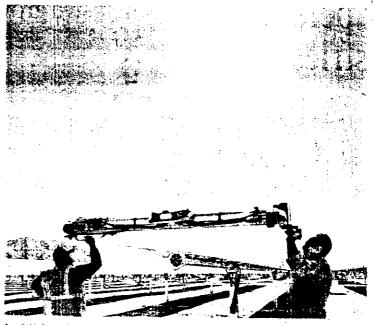
adversely for them since module prices have already started plateauing. Similarly, if the developers have not hedged against the deprecia-tions of the tion of the rupee then that too tould render projects

SUN BURN

risky. Solar tariffs hit a historic low of Rs 4.34 per unit in January follow-ing the bid for a 20 MW project in Ranasthan by Finnish solar power-company. Fortum Energy, At the time, many experts said that the tauffs are moving too low and that they would dissuade private lenders from giving foans for solar

projects.

'My view is that is long as the "My new schains long is the point has been until with good equipment and will last to the entire term of the power purchase agreement (PPA) with mining downtime, then although the promoter may not make much on their spatity, the lender will make money on their long," Mr. Shah and "Bud the levelopers are ones, their lender makaye spaces, their lender makaye spaces. eas, then lender may have expoaire to risk, in na ciew, though, interest posure is not very linding that it is posure is not very linding that profess four face the same kinds of arput fuel risks as thermal plants do." Mr.



Any slight changes in project costs could dent operating margins, says Tata Power Renewable Energy CEO Rabul

Shah said.

The key to boosting rooftop suhar adoption—something that has been aluggish so far—is to make the power distribution companies (discours) more financially secure, he said.

"The challenge has been that rooftop solar has been viable only for industrial consumers whose power tariffs are on the higher side. It is not viable for residential users at the moment whose tariffs are lower. When commercial and industrial users install roottop so-'ar, this displaces the electricity they are buying from the discoust. Because they ony less, the discoms are earning less from their high-est gaying consumers," he said. At a time when the health of the

discoms is so poor, they don't par-

ticularly favour people going for tooftop solar and buying less from the grid. Mr Shah said, adding that the cure is to improve the financial health of the discoms.

The renewable energy sector in India, though benefiting from the huge push by the NDA-government, still needs some incentives—both in policy and in the upcom ing Budget—for the sector to take off, Mr. Shah said.

"Unlike thermal or hydro plant, where they have multiple options for the sale of power, solar energy is usually sold to a bulk mayer like a discoin. So, by the time the plant is the develope commissioned, the developer needs clarity on the tariffs that will be available, the fact that the discoms will be willing to sign a PPA, and that any incentives that the

government might have for the industry will be available by the time the project is commissioned. he vaid

The upcoming Budget must also have a provision for solar equip-ment to be exempt from value added tax, Mr Shah said, echoing a view voiced by several industry leaders recently.

At the moment, the country has 34 GW of operating wind capacity and 4 GW of operating solar capacity. Going by the bid processes in the last year, an additional 2 GW should be under construction in each of the sectors

The government is giving solar a very big oush and I think there will be significant capacity addi-tion in the coming years," Mr Shah

Bescom starts buying power to meet City's energy needs, this summer /

Govt to hike electricity generation at hydel plants as Karnataka stares at crisis

Bosky Khanna

BENGALURU: The Bangalore Electricity Supply Company (Bescom) has started buying power from the Indian Energy Exchange Ltd to address Bengaluru's vast energy needs this summer.

The move comes as Karnataka stares at an imminent power crisis. Two units of the Raichur Thermal Power Station shut down on Wednesday for scarcity of water. The next day, fire broke out in the Sharavathi hydroelectric power plant in Shivamogga district, stoking fears of decline in power supply.

On Friday, Bescom pur-chased 100 MW of power from the Indian Energy Exchange and will buy another 100 MW on Saturday. It has purchased 39.18 million units of power since April 1, 2015. Bescom Managing Director Pankaj Kumar Pandey told Deccan Herald that they were doing their best to avert a power crisis in the coming months. The power is being purchased at Rs 1.6 to Rs 3 per unit.

Bengaluru's power demand is 2,500 MW per day, which

Bescom has been able to meet because of the purchases. The whole Bescom circle needs 4,500 MW, another Bescom official said. Bescom gets 1,700-1,900 MW from the central grid with the help of the Karnataka Power Transmission Corporation Limited (KPTCL). More power will be purchased if the need arises, he added.

Karnataka generates 3,000 MW of hydro power. Of this, Bescom's share is 1,500 MW. but the fire at Sharavathi caused a loss of 1,000 MW, said an official in the Energy Department.

Thus, power utilities will have to rely on thermal and wind power. The solar power generation is limited, according to the official. To make up for the shortage, the Energy Department is increasing power generation at Kadra and Kodasalli dams (both in Uttara Kannada district).

According to the official, only five out of the seven units at the RTPS are functional at any given time. The real setback is the fire at Sharavathi. "This is a temporary situation and will be resolved within a month. By this time, the ongoing tests to generate 800 MW at Yermarus Thermal Power Station and 700 MW at Ballari Thermal Power Station will be completed," he said.

To meet the demand in summer, Bescom will need at least 500 MW from each of the thermal units. KPTCL Director (Transmission) Sumanth S said the situation was not as alarming as previously thought.

Power shutdown in several East Bengaluru areas

STAFF REPORTER

BENGALURU: There will be no power supply from 10 a.m. to 4 p.m. on February 20, 21, 22, and 28 in the areas fed by 220 kV Hoody receiving station to carry out emergency maintenance work.

According to a release from Bescom, the areas to be affected are: H.B.R. 3rd Block, Teachers Colony, Ramdey Garden, Yaseen Nagar, Oil Mill Road, Mangala Layout, Kariyannapalya, K.S.F.C. Layout, Kacharakanahalli, Aravindanagar, Lokesh Tent Road, Bharathiyar Road, part of Kammanahalli Main Road. Mayor Shankar Road, Jal Vayu Vihar, H.R.B.R. Layout 2nd, 3rd, 4th and 5th Blocks, Ramaiah Layout, Karma Chandra Layout, Janakiram Layout, Banaswadi Railway Station Road, Sait Palya, Hennur Main Road, Govindapura Main Road, Rashad Nagar, K.G. Halli, Govindpura village, Yasin Nagar, Nagawara Main Road, Byrankunte, Kuppuswamy Layout, Vidyasagar, Thanisandra, Ramakrishna



Hegde Nagar, K. Naravanpura, N.N. Halli. Balaji Layout Phases 1 to 3, Railway Men's Layout,

BDS Layout, Central Exchange Layout, Sirdi Sai Ratan Layout, Balaji Krupa Layout, Noor Nagar, N. Nagenahalli, Shabari Nagar, Old Byappanahalli, Tank Well Road, Osborne Road, St. John's Road, Rukmini Colony, Annaswamy Mudaliar Road, Osborne Road 1st Cross, Kodanda Rama Layout, Narayan Reddy Colony, ITI Layout, S.K. Gar-Chinnappa Garden, den. Muddamma Garden, Krishnamma Garden, N.D. Road, Cox Town, Dodhi Gunta, Wheeler Road, Buddha Vihar Road, Sunder Murthy Road, Hynes Road, Spencer Road, Netaji Road, Coles Road, Masjid Street, B.S.A. Road, M.C. Colony, G.K. Colony 3rd Stage, Pillanna Garden, Post Office Road, Arokyamma Layout, B.M. Layout, Lazar Road,

Davis Road, Spencer Road, Basavanagar, Seetharam Palya, R.H.B. Colony, Lakshmisagara, Saraswathinagar, Maheshwarinagar,

Mahadevapura, Bande Ramagondanahalli, Varthur Gunjur. Balagere Road, Kachamaranahalli, BEML Layout, EPIP Phases 1, 2 and 3, Whitefield, Madhuranagar 1st, 2nd and 3rd Stages, Janata Colony, Siddarth Layout, Muneshwara Block, Devanagudi, Hoskote limits, Kadugodi, Belthur Colony, Kumbena Agrahara, Channasandra, Seege Halli, Kannamangala, Doddabana-Somenahalli, halli, Kage Maithri Layout, Gandhipura, Vijayanagar, Ambedkarnagara. Immadihalli, Nagondanhalli, Whitefield Main Road, Indiranagar 1st Stage, HAL 2nd Stage, Ulsoor, Old Madras Road, Benniganahalli, A. Narayanapura, B. Narayanapura, Kaggadasapura, Akash Nagar, Pai Layout, Byrasan-dra, C.V. Raman Nagar, East of N.G.E.F. Layout, Sadananganagar, Kasturinagar, Bhuvaneshwarinagar, Hoysalanagar among other areas.

Pat Linux of India aravathi fire: **Production will** resume soon

Bengaluru: A day after a blaze crippled production at the Sharavathi hydropower station at Linganamakki, the main source of power supply to the state grid, a high-level team of officials led by energy minister DK Shiva Kumar reviewed the incident on Friday and said full-fledged production at the plant would resume in a month.

The team concluded that a short circuit caused the fire which completely damaged the control room and losses have been pegged at over Rs 100 crore. "The power situa-tion in the state is likely to be affected for some time," officials added. Repairing the damaged machinery will be a costly affair. Assembly speaker Kagodu Thimmappa too visited the power station and met senior officials.

According to officials, the incident happened just after the first shift ended in the evening. THE