Before

UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

Petition No. 65 of 2025

In the Matter of:

Application seeking approval for the additional investment on Cyber Security and GIS Components, in ongoing IT/OT work sanctioned under RDSS, in order to meet out the critical requirements & cyber security compliances.

And

In the Matter of:

Uttarakhand Power Corporation Ltd., Victoria Cross Vijeta Gabar Singh Urja Bhawan, Kanwali Road, Dehradun.

...Petitioner

Coram

Shri M. L. Prasad Chairman

Shri Anurag Sharma Member (Law)

Shri Prabhat Kishor Dimri Member (Technical)

Date of Order: November 27, 2025

<u>ORDER</u>

This Order relates to the Petition filed by Uttarakhand Power Corporation Limited (hereinafter referred to as "UPCL" or "the Petitioner" or "the licensee") in the matter of 'additional investment on Cyber Security and GIS Components, in ongoing IT/OT work sanctioned under RDSS, in order to meet out the critical requirements & cyber security compliances'.

Background

2. The Petitioner vide its letter No. 1173/D(P)/UPCL dated 09.06.2025 submitted its Petition for investment approval on additional investment on Cyber Security and GIS Components, in ongoing IT/OT work sanctioned under RDSS, in order to meet out the critical requirements & cyber security compliances under the

provisions of the Clause 11 of Distribution and Retail Supply Licence and Regulation 40 of UERC (Conduct of Business) Regulations, 2014.

3. The Petitioner under 'Facts of the case' has submitted that:

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- (i) Honourable UERC vide its investment approval dated 19th Oct 2023 has approved the investment on the various projects in the State of Uttarakhand under the ambit of "REVAMPED DISTRIBUTION SECTOR SCHEME" of Ministry of Power, Govt. of India with the prime objective to improve the quality, reliability and affordability of power supply to consumers through a financially sustainable and operationally efficient Distribution Sector by Reducing the AT&C losses to 12-15% and ACS-ARR gap to zero by 2024-25. Prepaid Smart Metering, Distribution System Strengthening/Modernization Works and other works as per scheme guidelines has also been covered under the scheme.
- (ii) The above mentioned and approved investment under RDSS also includes the investment of Rs. 164.00 Cr. for IT/OT works under Loss Reduction category of the scheme which also includes the following investment of Rs. 122.25 Cr. under billing (MBC) works:

(Table-1)

S No.	Particulars	Sanctioned Amount (Rs. Cr.)
1	Hardware and System Software refresh/upgrade of Data Centre, Disaster Recovery Centre	64.8 0
2	Application Software (MBC and other Software)	30.92
3	GPS based GIS survey of assets, mapping and digitization	26.53
	Total	122.25

(iii) The additional Cyber Security and GIS software Components were also included by UPCL in the Tender/RFP issued for "Appointment of System Integrator (SI) for Implementation of Utility Billing System in UPCL" dated 28-08-2024 that were not part of the sanctioned DPR but were incorporated in the tender in the anticipation of approval of additional components under RDSS by MoP/GoI to address the rapidly increasing cyber security incidences, to ensure the cyber security compliances and to meet out the present requirements of GIS under RDSS. The estimated cost of these components worked out was Rs. 26.05 Cr. The details of components added are as under:

(Table-2)

		(Tal	ele-2)			
S. No.	Item description	Qty	Unit			
A. Cy	ber Security Components					
1	Compute /server	6	No.			
2	SOAR (Security Orchestration Automation and Response)	1	No.			
3	XDR (Extended Detection & Response)	1	No.			
4	HIPS (Host Intrusion Prevention System)	1	No.			
5	NIPS (Network Intrusion Prevention system)	1	No.			
6	End Point Protection (EPP) (Antivirus)	1	Lot			
7	Web Security	1	No.			
8	E-mail Security	1	No.			
9	DDoS (Distributed Denial of Service)	2	No.			
	Security audit of entire new applications, mobile apps					
10	including hardware, network and application Grey box	1	Lot			
	testing, VAPT etc. from CERT-In empaneled agency					
	Development of Cyber security policy, Data Privacy policy,					
11	IT usage policy and backup policy etc. for UPCL inline with	1	Lot			
	CEA/CERT-in guidelines					
10	Development of ISMS policy and ISO certification 27001 or	1	T - 1			
12	higher of UPCL Data Center and Disaster Recovery Center	1	Lot			
B. GI	B. GIS Components					
	Software Licences for GIS work complete including server					
	licences for hosting GIS application and minimum 4					
1	concurrent desktop user for working on GIS server and other	1	Lat			
1	licences of subsystem to run GIS application for all user of	1	Lot			
	UPCL with software support from OEM till GO-LIVE of					
	system					
2	Third party Data integration of Consumer Data & LT	1	Lot			
2	Network (AMISP etc.) including validations and QA/QC	1	LUI			
	One time data migration cost for transferring, validating,					
3	QA/QC of UPCL existing GIS data to new developed GIS	1	Lot			
	application					
4	Implementation cost of Web based GIS Application	1	Lot			
5	Implementation cost of Desktop Based GIS application	1	Lot			
6	Implementation cost of GIS Mobile application	1	Lot			
C. Ad	C. Additional Miscellaneous Components					
1	Large Display Screen (Minimum 55") for NMS/Monitoring	2	No.			
1	Software Display		110.			
	Server Rack minimum 42 U with dual IPDU, cable manager,					
2	FAN and perforated front and back door, 2 nos. iPDU etc. (6	12	No.			
	nos. racks in DC and 6 nos. in DR)					

(iv) UPCL has awarded the work mentioned at Table-1 above to M/s Infinite Computer Solutions (India) Ltd., Gurugram vide LoA no. 261/SE (RAPDRP-A)/UPCL dated 08/05/2025 having capital expenditure of Rs. 131.22 Cr. excluding the additional Cyber Security, GIS components and related software ATS mentioned

- at Table -2 above considering the fact that sunset of the RDSS scheme is expected in March 2026 and thus it is anticipated that funding for aforementioned additional components from RDSS is very bleak.
- (v) The above facts and circumstances were put before the BoD and request was made to allow the additional investment of Rs. 31.97 Cr. as per the price discovered in above tender against estimated price of Rs. 26.05 Cr. towards Cyber Security and GIS Software component for IT/OT works by UPCL from its own resources or through lending from banks /Financial Institutions considering the importance and criticality of these components for UPCL complete digital ecosystem. The board resolution of 120th Board Meeting held on dated 25.11.2024 and the board resolution of 123rd Board Meeting held on dated 01.05.2025 are attached as.
- (vi) The component wise quoted price by the L1 bidder (yet to be awarded) for Cyber Security and GIS component are as below:

(*Table-3*)

S No.	Item description	Qty	Unit	Total Quoted Cost (Including GST) Rs Lakhs
A. C	Cyber Security Components			
1	Compute /server	6	No.	141.60
2	SOAR (Security Orchestration Automation and Response)	1	No.	108.56
3	XDR (Extended Detection & Response)	1	No.	260.84
4	HIPS (Host Intrusion Prevention System)	1	No.	230.13
5	NIPS (Network Intrusion Prevention system)	1	No.	212.99
6	End Point Protection (EPP) (Antivirus)	1	Lot	202.99
7	Web Security	1	No.	177.00
8	E-mail Security	1	No.	226.56
9	DDoS (Distributed Denial of Service)	2	No.	354.00
10	Security audit of entire new applications, mobile apps including hardware, network and application Grey box testing, VAPT etc. from CERT-In empaneled agency	1	Lot	11.80
11	Development of Cyber security policy, Data Privacy policy, IT usage policy and backup policy etc. for UPCL in line with CEA/CERT- in guidelines	1	Lot	11.80
12	Development of ISMS policy and ISO certification 27001 or higher of UPCL Data Center and Disaster Recovery Center	1	Lot	23.60
	A. Sub-Total 1961.87			

S No.	Item description	Qty	Unit	Total Quoted Cost (Including GST) Rs Lakhs
B. G	GIS Components	ı	ı	I
1	Software Licences for GIS work complete including server licences for hosting GIS application and minimum 4 concurrent desktop user for working on GIS server and other licences of subsystem to run GIS application for all user of UPCL with software support from OEM till GO-LIVE of system	1	Lot	826.00
2	Third party Data integration of Consumer Data & LT Network (AMISP etc.) including validations and QA/QC	1	Lot	14.16
3	One time data migration cost for transferring, validating, QA/QC of UPCL existing GIS data to new developed GIS application	1	Lot	14.16
4	Implementation cost of Web based GIS Application	1	Lot	36.00
5	Implementation cost of Desktop Based GIS application	1	Lot	35.40
6	Implementation cost of GIS Mobile application	1	Lot	35.40
		Sub-	Total	1161.12
<i>C. A</i>	Additional Miscellaneous Components	ı	ı	
1	Large Display Screen (Minimum 55") for NMS/ Monitoring Software Display	2	No.	2.71
2	Server Rack minimum 42 U with dual IPDU, cable manager, FAN and perforated front and back door, 2 nos. iPDU etc. (6 nos. racks in DC and 6 nos. in DR)	12	No.	71.41
		Sub-T		74.12
	Tota	l(A+	B+C)	3197.11

4. The Petitioner under 'Justification for the investment proposal' has submitted that:

a. <u>Cyber Security Components</u>

Reasons for inclusion of additional Cyber Security Components -

- i. To ensure the compliance of Cyber Security Guidelines issued by Central Electricity Authority dated 07/10/2021.
- ii. To ensure the compliance of Cyber Crisis Management Plan (CCMP) prepared as per directions issued by National Critical Information Infrastructure Protection Centre (NCIIPC) and adopted by UPCL.

- iii. Identification of Dehradun SCADA Control Center as Critical Information Infrastructure (CII) by NCIIPC, gazette notification by State Government.
- iv. To ensure compliance of various advisory issued by CEA, CERT-in, CSIRT-power for Cyber security preparedness in Power Sector due to prevailing geopolitical situation emerged after 7th May 2025.
- v. Draft Central Electricity Authority (Cyber Security in Power Sector)
 Regulations, 2024 expected to be finalized shortly.
- vi. Since, most of the business processes of UPCL are IT driven, ranging from commercial applications to accounts preparation, system security from Cyber Threats is of prime importance.
- vii. Over the years, UPCL has implemented several online systems for the convenience of its consumers and employees and is also making efforts regularly to make the system more robust and efficient.
- viii. To take pro-active measures to increase cyber security awareness and to improve cyber audits, assessment & exercises.
- ix. IT systems are exposed to many third-party integrations done with other government portal for better consumer services.
- x. Due to emerging new threat environment, it is utmost importance and necessity for UPCL to enhance the current security landscape by installing critical cyber security components.
- xi. At the time of preparation of DPR for the RDSS IT/OT components during the month of October'2021, the additional cyber security components were not envisaged as per the prevailing cyber threat perception of that time but has been included at the time of tender as per the revisited cyber threat perceptions and guidelines as well as advisories of the concerned cyber security agencies of the State and Central Government. During the last 2-3 years the various cyber awareness program & number of guidelines/regulations were issued by CEA, CERT-IN, NCIIPC, CSIRT Power etc. By going through all guiding documents and interactions held with officials from CEA/ CERT-IN/ NCIIPC/ CSIRT Power from time to

time UPCL learnt that Data Center activities shall be fully compliant only when the complete cyber security ecosystem shall be in place.

b. <u>GIS Components</u>

Reasons for inclusion of additional GIS Components -

- i. The cost of GIS Component sanctioned as part of IT/OT work for the State of Uttarakhand by PFC was mainly for the field survey activities of HT network, concerned Electrical assets and its mapping/digitization. Apart from this, to cater the feature of Undergrounding Network and other software upgrades, it was felt that for proper Assets mapping under the GIS system, it is very important to update undergrounding network system in GIS software and for which it is necessary to upgrade the existing GIS software or procure the latest version of GIS software.
- ii. GIS software licences of ESRI owned by UPCL under RAPDRP/IPDS projects were able to meet out the existing requirement in GIS with the available version of software. However, the software of ESRI was working and therefore, only survey work was considered while preparing the DPR for IT/OT that majorly includes the Assets Mapping & Indexing up to the level of Distribution Transformers.
- iii. Upgradation of the existing GIS software to the latest standards or procurement of latest version of GIS software with features of undergrounding network.
- iv. Fulfilment of requirement of GIS for undergrounding cabling of network under ADB scheme in Dehradun town & further extension in Haridwar, Haldwani, Rishikesh, etc.
- v. Requirement for Catering to the need of PM Gati Shakti scheme."

5. The Petitioner under 'Relief Sought' has submitted that:

"That, in facts and circumstances setout hereinabove, it is respectfully prayed that the Hon'ble Commission may under its inherent powers, graciously be pleased to:-

. . .

- (ii) Grant suitable opportunity to the applicant within a reasonable time frame to file additional material information that may be subsequently available and as may be required by the Hon'ble Commission;
- (iii) Grant approval for the additional investment on Cyber Security and GIS Components, in ongoing IT/OT work sanctioned under RDSS, in order to meet out the critical requirements & cyber security compliances through arranging finances from Banks/ Non Banking FIs in order to meet out the requirements of the UPCL and the State of Uttarakhand.
- (iv) Pass such other order(s) that may be deemed fit and proper in the facts and circumstances of the case."
- 6. The Petitioner alongwith its Petition has enclosed certified true copies of the 120th Board of Directors meeting (Item No. 120.25) and 123rd Board of Directors meeting (Item No. 123.09) held on 25.11.2024 and 01.05.2025 respectively.

The excerpt of resolution passed by BoD in meeting dated 25.11.2024 states that:-

"ITEM NO. 120.25: To sanction the cost of cyber security and GIS Components additionally in the IT/OT work sanctioned earlier under RDSS in order to meet out the requirements of the State of Uttarakhand.

"RESOLVED THAT the approval of the Board be and is hereby accorded to sanction the additional cost of Rs. 26.05 Cr. in order to procure the identified critical cyber security components and to meet out requirements of GIS components in the favour of the work under the ongoing IT/OT tender dated 28.08.2024.'

'RESOLVED FURTHER THAT the additional assistance of Rs. 26.05 Cr. For IT/OT works under RDSS be availed with 90% as grant from PFC, MoP/GOI under RDSS Scheme.'

'RESOLVED FURTHER THAT the 10% amount (Rs. 2.605 Crore) of the additional sanctioned project cost is to be arranged preferably through Government of Uttarakhand under Equity for FY 2024-25.'

'RESOLVED FURTHER THAT the Managing Director and Director (Project) be and hereby severally authorised to execute such deeds, documents and other writings as may be necessary or required for the purpose aforesaid."

The excerpt of resolution passed by BoD in meeting dated 01.05.2025 states that:-

"ITEM NO. 123.09: To sanction the change in mode of funding and amount to meet the cost of cyber security and GIS Components additionally in the IT/OT work sanctioned earlier under RDSS in order to meet out the requirements of the State of Uttarakhand as sanctioned earlier through board resolution (Item No. 120.25) in its 120th meeting.

RESOLVED THAT in view of the facts stated above the approval of the Board be and is hereby accorded for modification in the resolution passed in the 120th Board Meeting to the extent that the total quoted cost after discount amounting to Rs. 31.97 Cr. against Cyber Security and GIS Software component may be arranged by UPCL from its own resources or through lending from banks/Financial Institutions.'

'RESOLVED FURTHER THAT approval is also accorded for filing a petition for investment approval for the additional work as mentioned above amounting to Rs 31.97 Cr. may be filed before honourable UERC as per relevant MYT regulations.'

'RESOLVED FURTHER THAT Managing Director and Director (Project) be and hereby severally authorized to execute such deeds, documents and other writings as may be necessary or required for the purpose aforesaid."

7. On examination of the proposal made in the Petition, certain deficiencies/ infirmities were identified and accordingly, the Commission vide its letter No. 893 dated 29.08.2025 directed the Petitioner to furnish its point-wise reply on the following latest by 15.09.2025. In response to the same Petitioner vide its letter no. 2041/Dir.(Project)/UPCL dated 15.09.2025 submitted its reply. The point-wise deficiencies/infirmities identified by the Commission and submission of the Petitioner are detailed below: -

"

1	The Commission vide its Order dated 19.10.2023 had approved the investment on project proposed under 'Revamped Distribution Sector Scheme' (RDSS) wherein, UPCL, under the loss reduction works category had proposed the IT/ OT works of estimated cost of Rs. 164 Cr. In this regard, UPCL is required to submit the item-wise details of works with their cost as proposed under the loss reduction works of RDSS vis-a-vis their status.	The item-wise details proposed under IT/OT RDSS works having estimated cost of Rs 164 Cr is attached as
2	UPCL is required to furnish the architecture drawing of existing Data Centre and Disaster Recovery Centre along with its interfaces with its MBC server/client, security appliances, Cyber security solutions with hardware and software categorization. Further, UPCL is required to superimpose the proposed Cyber Security components on the aforesaid architecture drawing clearly bifurcating the existing and proposed system preferably with different color. The aforesaid architecture drawing is to be submitted in clearly visible colored copies in triplicate.	Following Architecture drawing showing interfaces with MBC Server/Client, Security Appliances, Cyber Security solution with hardware & software categorization are attached as • Existing Data Centre Architecture Diagram • Existing Disaster Recovery Centre Architecture Diagram • Proposed High-Level Design (HLD) of Data Centre & Disaster Recovery Centre with ongoing IT Hardware Upgradation works under RDSS IT/OT components along with the proposed cyber security components are shown in the architectural drawings. • Major Components in process of implementation are summarized below S Component Name Count No. A. IT Components proposed under Data Centre, Upgradation 1 Networking Equipment's 14 2 Servers 22 3 Storage 2 4 Firewalls 4 5 Web Application Firewall 2 6 Server Load Balancer 2 7 UPS 2 8 SIEM 1 B. IT Components proposed under DR Centre, Upgradation 1 Networking Equipment's 7 7 2 Servers 22 3 Storage 2 2 3 Storage 2 2 3 Storage 3 3 3 3 3 3 3 3 3

SNo.	Deficiencies/infirmities raised by the	UPCL Response	
	Commission in its letter dated 29.08.2025		
		5 Web Access Firewall 1	
		6 Server Load Balancer 1	
		7 UPS 2	
		C. Cyber Security Components proposed	
		by UPCL petition under review	
		1 SOAR 1	
		2 XDR 1	
		3 HIPS 1 1	
		5 Web Gateway 1	
		6 Email Gateway 1	
		7 End Point Protection 1	
		8 DDoS Protection 2	
		9 Compute 6	
		3 Compute 0	
	UPCL is required to furnish details of following points as mentioned in Table 3 of the petition: -	The following details are attached	
	i) Configuration/ specifications of all the proposed Cyber Security components, GIS components and additional miscellaneous component.	Configuration/ specifications of all the proposed Cyber Security components, GIS components are attached as	
	ii) Details of licences, subscriptions, Hardware/Software, number of users in the proposed components viz. SOAR, XDR, HIPS, NIPS, EPP, Web Security, DDoS, Email Security.	Details of proposed Cyber Security Components, Licences based on user and functionality, subscription, Hardware/Software are attached as	
3	Further, UPCL is required to confirm that whether XDR and EPP are separate software or modules in one software.	It is to inform that in the proposed Trend Micro solution XDR and EPP are separate licences in one software module. The comparison of XDR and EPP received from OEM is enclosed as	
	iii) The approved quoted make/model list against each item proposed for works amounting to Rs 31.75 Cr. along with warranty/subscription period/licences in years.	Please refer to Table-1 in	
	iv) Furnish size of large display screen and make/model of Server rack mentioned at S. No. C1 & C2 of Table 3 of its instant Petition.	 The required details are as under Large Display Screen (Minimum 55") Total Number of Rack – 12, Make- Eaton rack with dual iPDU 	

SNo.	Deficiencies/infirmities raised by the Commission in its letter dated 29.08.2025	UPCL Response
	v) Clarify the size of Lot as mentioned against certain items in Table 3 of this instant Petition.	The desired information is also furnished in
	UPCL is required to furnish a write up on each item proposed at Table 3 of its Petition along with its function/usability.	Broad functionality and usability of the proposed cyber security components with complete covering of all proposed components and associated third party vendor risk management from security point of view i.e. network security, data security, application security is attached as
4	Also, elaborate complete covering of cybersecurity items in the petition including network security, data security, application security, and cloud security (if any or associated parties) of its IT/OT infrastructure and associated 3rd party Vendor Risk Management as per standard guidelines.	As third-party integration UPCL has integration with AMISP and Customer Care Centre. AMISP services are hosted in a cloud data centre with all the Cyber Security compliance in concurrence to the standard guidelines issued by the concerned authorities viz. MEITY/CERT-In/CEA, MoP, GoI etc.
	Further, UPCL is required to furnish work flow diagram of the Cyber Security system proposed in the instant Petition.	The integration with AMISP is secured through measures such as whitelisting of IPs and secure API services between the utility and AMISP, along with secure point-to-point connectivity established via the firewall.
		Similarly, in the case of Customer Care Services the integration is secured through whitelisting of services and through Firewall.
		The workflow diagram of proposed cyber security system is attached as
5	UPCL is required to justify that why proposed additional cyber security works were not implemented earlier or not considered initially under RDSS when general directions and policies of cyber	In this context, it is to bring to the kind attention of the Hon'ble Commission that at the time of preparation of Detailed Project Report (DPR) for IT/OT works

SNo.	Deficiencies/infirmities raised by the	UPCL Response
	Commission in its letter dated 29.08.2025	
	security were available to incorporate threat intelligence, DDoS attacks etc.	under RDSS during the month of October'2021, as per the prevailing cyber security landscape at that time apart from the standard Data Centre base network security equipment, the component of SIEM was also provisioned, that got approved along with IT/OT billing DPR on 10-Jan-2022.
		However, during the last 2-3 years, the various cyber awareness programs were conducted& number of guidelines/regulations were issued by CEA, CERT-IN, NCIIPC, CSIRT Power/ITDA/GoU etc. in light of ever emerging Cyber Security landscape and threats.
		Therefore, after multiple interaction & meetings with the aforesaid agencies/organisation and after due diligence & deliberations, it was concluded that in order to have more bolstered Cyber Secure Ecosystem, inclusion of additional Cyber Security Components is need of the time.
	Considering past cyber security incidences in the state, UPCL is required to ensure whether ITDA/NIC/ Govt. norms have been incorporated in the instant proposal and fulfilling defined standards and parameters as directed in enclosed Uttarakhand government's order no. 307801 dated 19.06.2025	Considering the cyber security incidences, the following security activities are being regularly carried out to ensure a cyber-secure IT environment using the limited security components available with UPCL:
6	(particularly for category 2.2 and category 3).	 Migration of the UPCL informative website to the S3WaaS platform for enhanced security and reliability. Regular examination of logs from web servers and perimeter devices (such as WAF, Firewall, and DNS) to detect malicious requests or traffic. Periodic changes of privileged account credentials.

SNo.	Deficiencies/infirmities raised by the	UPCL Response
	Commission in its letter dated 29.08.2025	
	29.08.2025	 Continuous monitoring of emails to identify and prevent phishing attacks. Strict implementation of Geofencing policies. Retention of logs from critical devices for a minimum period of 180 days. Deployment of a Web Application Firewall (WAF). Deployment of a firewall at the MPLS network edge for filtering traffic originating from UPCL remote offices. Restriction of direct internet exposure to servers. Regularly instructing users to follow Cyber Hygiene & Security principles. UPCL is ensuring the best possible security practices with the existing infrastructure. Full compliance with cybersecurity norms will be achieved once required cyber security components proposed in current petition are deployed.
		Furthermore, it is humble submission before the Hon'ble Commission that UPCL is not governed by the Uttarakhand government's order no. 307801 dated 19.06.2025 as the same is applicable to all the Govt. departments, Boards and State Govt. Financed autonomous institutions while UPCL does not fall in this category.
7	UPCL is required to justify the reason for proposing the email server in its instant Petition against the @uk.gov.in emails of government.	In this context, it to bring to the kind notice of the Hon'ble Commission that in-house email solution was implemented in UPCL under RAPDRP Part-A project in 2011. Under this program, IBM Lotus Dominos email software (presently HCL Lotus Dominos) was installed in UPCL. Email security solution

SNo.	Deficiencies/infirmities raised by the Commission in its letter dated 29.08.2025	UPCL Response
	20.00.2023	from M/s Trend Micro is being used from 2011.
		With intent to use the existing email solution in future, email security was also incorporated in the tender and in the current petition for approval.
		As far as use of platform@uk.gov.in for emails is concerned, UPCL is presently in touch with NIC for clarity on email data migration and another requirement. So as such, at present moment it would not be possible for UPCL to confirm that whether UPCL will be able to use @uk.gov.in email solution of NIC.
8	UPCL is required to confirm that there is no duplicity in the work proposed in the instant Petition with the proposed IT/OT works under loss reduction works of RDSS or proposed/implemented earlier by it.	This is to confirm that there is no duplicity in the work proposed by UPCL in the instant petition with the proposed IT/OT works under loss reduction works of RDSS or proposed/implemented earlier by it.
9	UPCL is required to confirm that the proposed Cyber Security and GIS related works in the instant Petition will be capable to interlink/ synchronize/ adoptable with the existing infrastructure or being developed by the AMISP under the RDSS scheme.	UPCL confirms that the proposed Cyber Security and GIS related works under the instant Petition have been carefully designed and planned to ensure full compatibility with the existing infrastructure. These solutions have been proposed after a detailed analysis and identification of UPCL's Data Centre Services, with the objective of strengthening and enhancing the security of the services running at the UPCL Data Centre while ensuring long-term reliability. Furthermore, the proposed solutions are structured to provide scalability, interoperability, and resilience, thereby ensuring that current operations remain unaffected while fully supporting future requirements.

SNo.	Deficiencies/infirmities raised by the Commission in its letter dated 29.08.2025	UPCL Response
10	UPCL is required to confirm that the proposed works in the instant Petition comply with the requirement and specifications of different guidelines/Orders of MoP and Uttarakhand Government as of present date.	This is to confirm that the proposed works in the instant Petition comply with the requirement and specifications of different guidelines/ Orders of CEA, CERT-IN, NCIIPC, CSIRT Power/ ITDA/GoU etc.
11	UPCL under 'Facts of the Case' at S. No. 4 (iv) of its instant Petition has mentioned that "sunset of the RDSS scheme is expected in March, 2026 and thus it is anticipated that funding for aforementioned additional components from RDSs very bleak". In this context, it is observed that sunset of the RDSS scheme has been extended by 02 years i.e. up to March, 2028 as per MoP notification dated 16.07.2025. Therefore, UPCL is required to rigorously pursue for additional funding for works proposed in this Petition and apprise the Commission regarding the action taken by it.	In this context, it is to bring to kind notice of the Hon'ble Commission that under RDSS no works are now being sanctioned and MoP in its 50th Monitoring Committee Meeting held on 7th Aug'2025 instructed to Nodal Agencies to de-sanctioned the infrastructural works (except smart metering works) which are not awarded till 31.12.2025. Copy of relevant extract of MoM dated 12th August 2025 is enclosed as From the MoM, it is quite clear that chances of getting additional funding for the additional cyber security & GIS component is almost nil.
12	At point 5(a)(iv) of the Petition, UPCL has informed that it has ensured compliance with various advisories issued by the CEA, CERT-in, and CSIRT-Power regarding Cyber Security preparedness in the power sector, in light of the prevailing geopolitical situation that emerged after 7th May 2025. However, it is noted that the tender was floated sometime in 2024, i.e., prior to the issuance of the aforementioned advisories. UPCL is therefore required to explain how compliance with these advisories has been ensured and must confirm that the same has been duly incorporated into their proposed work plan.	 In light the alerts and advisories issued by CERT-In and NCIIPC at the time of Geo-political emergency, UPCL has immediately implemented the following security actions: Continuous monitoring of emails to detect and prevent phishing attacks. Deployment of a Web Application Firewall (WAF). Restriction of direct internet exposure to servers. Strict enforcement of Geo-Fencing policies. Immediate change of administrator credentials for servers, databases, applications, and CMS. Disabling of PowerShell on Windows servers and client machines.

SNo.	Deficiencies/infirmities raised by the	UPCL Response
	Commission in its letter dated 29.08.2025	
		 Disabling of VPN services during non-working hours. 24 x 7 operational monitoring with logs examined continuously to detect unusual or malicious attempts. Further, in reference to the alerts and advisories shared by security agencies, it has been observed that their primary focus is on preventing utilities from threats such as DDoS attacks, phishing, ransomware, website defacement, and other cyber intrusions targeting critical infrastructure. The security components proposed by UPCL can effectively handle these threats by providing protection at the network, application, data, and monitoring levels. This ensures comprehensive coverage against the identified risks, strengthens resilience of UPCL's IT and OT environments, and enhances the overall cyber defence posture of the utility.
		As far as the observation of Hon'ble Commission raised in this query, it is to humbly submit that submission of UPCL in the petition may kindly be seen in terms of general compliance to various advisories issued by CEA, CERT-IN, NCIIPC, CSIRT Power etc. for cyber security preparedness in power sector due to prevailing geopolitical situation and citation of geopolitical event of 7th May'2025 was quoted in continuation of the same as the petition was filed after this date. Moreover, it is envisaged that the additional cyber security components incorporated in the bid document by UPCL will be able to substantially tackle the cyber incidences that may occur in future in wake of geopolitical event of 7th May 2025 to secure the cyber infrastructure of UPCL. And,

SNo.	Deficiencies/infirmities raised by the Commission in its letter dated 29.08.2025	UPCL Response
	23.00.2023	it was nowhere the intent of UPCL to prove that UPCL has taken care of the possible cyber security threats that may have emerged after the event of 7 th May'2025 in its petition.
13	UPCL in its Petition, has informed that initially only field survey-related activities were considered. However, at the current stage, it has become evident that either an upgradation or procurement of new GIS software is required to ensure seamless operational functionality. In this regard, UPCL is required to submit the following clarifications: - a) Why was the requirement of GIS software modification or procurement not considered during the initial, planning and assessment stages? b) Provide detailed justification for opting for the procurement of new software instead of upgrading the existing one, especially considering that upgradation could potentially result in substantial cost savings for UPCL.	
		during the preparation of Detailed Project Report (DPR) for RDSS work in 2022. While discussions were held with the PFC team to request support for this upgrade under the Utility Billing Project to cater to the new requirement of

SNo.	Deficiencies/infirmities raised by the Commission in its letter dated 29.08.2025	UPCL Response
	23.00.2023	underground work, the proposal was not get through.
		Further, if UPCL had included only up-gradation of existing GIS application licences, this work would have been vendor dependent resulting in higher cost as in this case OEM would have recovered AMC cost from the retrospective period for which AMC was not purchased in addition to the cost of up-gradation.
		Considering the above scenario and to encourage broader participation from bidders, provisions were made for both options, the upgrade of the existing software or the procurement of a new GIS software solution and bidders are free to propose suitable solution.
		In the event of new software procurement, it has been ensured that the existing GIS data will seamlessly migrate to the new system without any data loss or compatibility issues.
	UPCL has stated in its Petition that only two bidders participated in the tender process with M/s Infinite Computer Solutions, Gurgaon emerging as the L-1 bidder. In this context, UPCL is required to clarify the following:-	In this context, it is to bring to kind notice of the Hon'ble Commission that initially the tender was floated by UPCL in Dec, 2023 in line with RDSS guidelines, however, the tender could not be materialized and
14	a) What were the reasons for such low participation in the tender process? Could this limited competition have contributed to the significantly higher quoted rates compared to UPCL's estimated cost (quoted price- Rs. 31.97 Cr. Vs estimated cost Rs. 26.05 Cr.)?	scraped due to non-qualification of the submitted proposal. The tender was again floated in Aug, 2024 incorporating the revised RDSS guidelines/ SBD. The pre-bid meeting was also held and the clarifications / required amendments were also issued to increase the participation. UPCL published
	b) Does UPCL consider the quoted rates to be within a reasonable range when compared with prevailing market prices, or are they assessed to be higher than current competitive market rates?	eleven (11) Nos. corrigenda for the said tender and also incorporated all the amendments in the SBD Despite several efforts and multiple extensions, only two bids were received against tender. Looking at

SNo.	Deficiencies/infirmities raised by the Commission in its letter dated 29.08.2025	UPCL Response
		the timelines of RDSS and criticality of work for UPCL, The tender was opened on 25 th Jan'2025.
		The tender was invited for the quotation of entire scope of supply and work for Billing System under IT/OT works under RDSS.
		The bidders bid in a turnkey contract based on the various terms and conditions, SLA, payments terms etc. after carrying out due risk analysis at their end to enhance the probability of becoming the successful bidder as well as to ensure a financially viable contract for them, quote the rates accordingly.
		In the backdrop of above submission, it is to state that, as the tender comprises of many components including hardware, software, application development cost, GIS etc. therefore, it is very difficult to compare the quoted individual component cost with the individual component from market rates.
		Furthermore, within the IT industry, security solutions are highly diverse in terms of technology, scope, and implementation models. Unlike standardized products, there is no direct 'apple-to-apple' comparison between offerings, as each solution may differ in features, architecture, and the support levels. This lack of uniformity makes it difficult to establish a fair benchmark and, consequently, to directly compare the pricing of different vendors in the market.
		In light of above facts, it is further to submit that the total cost quoted by the L-1 bidder including cyber security and GIS components post negotiation is well within the range of 110% of estimated value for the

SNo.	Deficiencies/infirmities raised by the Commission in its letter dated 29.08.2025	UPCL Response
		works and the same has been found reasonable by the competent committee of UPCL to award the work to the L-1 Bidder accordingly.
15	UPCL is required to furnish phasing of expenditure for the proposed works.	Details are enclosed in
16	UPCL is required to furnish a bar chart depicting the timelines of each activity with start and end date for the works proposed in the instant Petition.	Details are enclosed in

,,

8. Further, the Commission found certain additional deficiencies/infirmities in the DPR and aforesaid submission dated 15.09.2025 of the Petitioner and accordingly, the Commission vide its e-mail dated 31.10.2025 directed the Petitioner to furnish its point-wise reply on the following additional deficiencies/infirmities at the earliest:-

"

- 1. UPCL is required to submit the cost benefit analysis of the works proposed in the instant Petition.
- 2. UPCL is required to submit the mode of financing clearly indicating the debt and equity portion of the proposed cost.
- 3. UPCL has submitted that the L1 price of the proposed works amounting to Rs. 31.97 Cr. has been discovered. In this regard, UPCL is required to confirm whether the letter of award has been issued or not.
- 4. UPCL is required to confirm regarding the nature of proposed works against each item as mentioned at Table 3 of its Petition into capex/opex alongwith its cost."
- 9. In response to the above additional deficiencies/infirmities, Petitioner vide its letter dated 22.11.2025 submitted its reply and furnished the following:-

"

1. ...

Cyber Security: - On the Matter of Cost-Benefit Analysis for the Investment Proposed by UPCL on Cyber Security Components UPCL respectfully submits that the Cost-Benefit Analysis for the proposed investment in Cyber Security Components cannot be quantified in monetary terms. The proposed cyber security measures are essential for safeguarding sensitive and confidential data, preventing potential financial and operational losses arising from cyber incidents, ensuring business continuity, maintaining consumer confidence, and complying with the statutory and regulatory framework.

It is further submitted that investments in cyber security are preventive and protective in nature rather than revenue-generating. Therefore, their benefits are primarily qualitative, focusing on risk mitigation, and protection of critical information infrastructure of the utility, which cannot be directly expressed in financial terms. Accordingly, the proposed expenditure is imperative and justified to ensure secure, reliable, and compliant operations of UPCL's information and operational technology systems.

GIS: -

The proposed upgradation and full-scale implementation of the Geographic Information System (GIS) aims to modernize network management and enhance operational efficiency across Uttarakhand Power Corporation Limited (UPCL).

Previously, a GIS solution was implemented only in selected town areas under the Government of India's R-APDRP Part-A scheme. The existing software, though functional, has not been upgraded to the latest version and has been operating in UPCL without Annual Technical Support (ATS). Since the GIS application was limited to specific towns and supported by perpetual software licences, UPCL was able to meet desired output.

However, under the Revamped Distribution Sector Scheme (RDSS), a comprehensive asset survey is being conducted for the entire state. Additionally, with the implementation of underground cabling projects under various schemes, the current GIS platform requires significant upgradation or replacement. The new GIS system must support modern features, enhanced data accuracy, and seamless integration with upcoming digital systems such as: Advanced Billing System, Smart Metering Infrastructure, SCADA (Supervisory Control and Data Acquisition) Systems, Underground Cabling Network Management.

The Key Benefits with respect to the investment incurred on the Proposed GIS System update are as below:-

- Facilitates energy accounting up to the Substation, Feeder and Distribution Transformer (DTR) levels which helps in the identification of theft prone area and high loss feeders/DT's on spatial basis. This may help in reduction of losses and consequent improvement in revenue of UPCL.
- Enables precise asset mapping and life-cycle management for all network components. This will help in predictive maintenance of various asset and reduces equipment failure and downtime of the asset. This will increase the lifespan of asset and reduction in O&M cost of UPCL.
- Provides spatial data management essential for the ADB-financed undergrounding works in Dehradun, and future extensions in Haridwar, Haldwani, Rishikesh, etc. This will help in handling of outage complaints and service requests using location-based data and significant reduction in consumer complaints.
- Meets the requirements of the PM Gati Shakti scheme by providing spatial data interoperability for infrastructure planning. UPCL data help in the planning for infrastructure projects of GoU.
- Strengthens UPCL's capability for efficient network management, improved consumer service, and integration with smart grid technologies.
- Improve operational efficiency and consumer services by accurate asset mapping, consumer indexing, integration with Smart Metering, SCADA, and Billing Systems for real-time data visibility.
- Facilitates outage management by faster fault localization and reduced supply restoration time, thereby improving reliability indices (SAIDI/SAIFI).

Thus on the Matter of Cost-Benefit Analysis for the Investment Proposed by UPCL on GIS software Components, UPCL respectfully submits that the Cost-Benefit Analysis for the proposed investment cannot be quantified strictly in monetary terms but the same will have tangible and non-tangible benefits as listed above. Further, in continuation to above, it is to emphasize that GIS implementation is

also the requirement of present time for embracing the new technologies in order to derive the required benefits as explained above for long term impact on improvement of UPCL with respect to more efficient field operations, better network planning, optimized maintenance, lower downtime that shall result in better consumer services and thus enhanced consumer satisfaction level. Moreover, GIS implementation is an essential element to be future ready for implementation of smart grid operations in power distribution sector especially in the wake of massive smart meter implementation, RTDAS implementation and proposed SCADA implementation in UPCL to leverage the complete benefits, hence the proposed expenditure is imperative and justified in the interest of work, efficiency and better consumer services.

2. ...

The necessary funds for the proposed investment shall be arranged by UPCL either from its own internal sources or through borrowings from banks/financial institutions such as REC or PFC, in a Debt to Equity ratio of 70:30. UPCL shall finalize the required financing arrangements after obtaining the necessary approval from the Hon'ble Commission.

3. ...

It is hereby confirmed that, till date, UPCL has not issued the Letter of Award (LoA) for the work proposed by UPCL in its petition submitted before the Hon'ble Commission.

4. ...

UPCL Response:-

				Total Quoted	Type of component	Nature of work
S1. No.	Item description	Qty.	Unit	Cost (Including GST) Rs Lakhs	(Hardware/ Subscription licence)	(Capex/ Opex)
A. Cy	ber Security Components					
1	Compute /server	6	No.	141.6	Hardware	Capex
2	SOAR (Security Orchestration Automation and Response)	1	No.	108.56	Perpetual licence	Capex
3	XDR (Extended Detection & Response)	1	No.	260.84	Perpetual licence	Capex
4	HIPS (Host Intrusion Prevention System)	1	No.	230.13	Perpetual licence	Capex
5	NIPS (Network Intrusion Prevention system)	1	No.	212.99	Hardware+ perpetual licence	Capex

				Total Quoted	Type of component	Nature of work
S1. No.	Item description	Qty.	Unit	Cost (Including GST) Rs Lakhs	(Hardware/ Subscription licence)	(Capex/ Opex)
6	End Point Protection (EPP) (Antivirus)	1	Lot	202.99	Perpetual licence	Capex
7	Web Security	1	No.	177	Perpetual licence	Сарех
8	E-mail Security	1	No.	226.56	Hardware + perpetual licence	Capex
9	DDoS (Distributed Denial of Service)	2	No.	354	Hardware + perpetual licence	Capex
10	Security audit of entire new applications, mobile apps including hardware, network and application Grey box testing, VAPT etc. from CERT-In empaneled agency	1	Lot	11.8	Annual Activity	Орех
11	Development of Cyber security policy, Data Privacy policy, IT usage policy and backup policy etc. for UPCL in line with CEA/CERT- in guidelines	1	Lot	11.8	One-Time activity	Capex
12	Development of ISMS policy and ISO certification 27001 or higher of UPCL Data Center and Disaster Recovery Center	1	Lot	23.6	One-Time activity	Capex
A. Su	b-Total		I	1961.87		
B. GI	S Components					
1	Software Licenses for GIS work complete including server licenses for hosting GIS application and minimum 4 concurrent desktop user for working on GIS server and other licenses of subsystem to run GIS application for all user of UPCL with software support from OEM till GO-LIVE of system	1	Lot	826	Perpetual licence	Capex
2	Third party Data integration of Consumer Data & LT Network (AMISP etc.) including validations and QA/QC	1	Lot	14.16	One-Time activity	Capex
3	One time data migration cost for transferring, validating, QA/QC of UPCL existing GIS data to new developed GIS application	1	Lot	14.16	One-Time activity	Capex
4	Implementation cost of Web based GIS Application	1	Lot	236	One-Time activity	Capex
5	Implementation cost of Desktop Based GIS application	1	Lot	35.4	One-Time activity	Capex
6	Implementation cost of GIS Mobile application	1	Lot	35.4	One-Time activity	Сарех
	b-Total			1161.12		
	ditional Miscellaneous Components		1	1		
1	Large Display Screen (Minimum 55") for NMS/Monitoring Software Display	2	No.	2.71	Hardware	Capex
2	Server Rack minimum 42 U with dual IPDU, cable manager, FAN and perforated front and back door, 2 nos. iPDU etc. (6 nos. racks in DC and 6 nos. in DR)	12	No.	71.41	Hardware	Capex
C. Su	b-Total			74.12		
Total	! (A+B+C)			3197.11		
					<u> </u>	

Commission's Observations, Views & Directions: -

- 10. Based on the examination and analysis of the proposal & subsequent submissions made by the Petitioner before the Commission, the observations, views & directions of the Commission are as follows:
 - (1) The Petitioner in its instant Petition has proposed works amounting to Rs. 31.97 Cr. covering 3 components namely Cyber Security Components, GIS components and Additional Miscellaneous Components as detailed below:-

S. No.	Item description	Qty	Unit	Total Quoted Cost (Including GST) Rs Lakhs
A. Cyb	er Security Components			
1	Compute /server	6	No.	141.60
2	SOAR (Security Orchestration Automation and Response)	1	No.	108.56
3	XDR (Extended Detection & Response)	1	No.	260.84
4	HIPS (Host Intrusion Prevention System)	1	No.	230.13
5	NIPS (Network Intrusion Prevention system)	1	No.	212.99
6	End Point Protection (EPP) (Antivirus)	1	Lot	202.99
7	Web Security	1	No.	177.00
8	E-mail Security	1	No.	226.56
9	DDoS (Distributed Denial of Service)	2	No.	354.00
10	Security audit of entire new applications, mobile apps including hardware, network and application Grey box testing, VAPT etc. from CERT-In empaneled agency		Lot	11.80
11	Development of Cyber security policy, Data Privacy policy, IT usage policy and backup policy etc. for UPCL in line with CEA/CERT-in guidelines	1	Lot	11.80
12	Development of ISMS policy and ISO certification 27001 or higher of UPCL Data Center and Disaster Recovery Center	1	Lot	23.60
		A. Su	b-Total	1961.87
B. GIS	Components			
1	Software Licences for GIS work complete including server licences for hosting GIS application and minimum 4 concurrent desktop user for working on GIS server and other licences of subsystem to run GIS application for all user of UPCL with software support from OEM till GO-LIVE of system	1	Lot	826.00

S. No.	Item description	Qty	Unit	Total Quoted Cost (Including GST) Rs Lakhs					
	Third party Data integration of Consumer Data &								
2	LT Network (AMISP etc.) including validations and	1	Lot	14.16					
	QA/QC								
	One time data migration cost for transferring,								
3	validating, QA/QC of UPCL existing GIS data to	1	Lot	14.16					
	new developed GIS application								
4	Implementation cost of Web based GIS Application	1	Lot	236.00					
5	Implementation cost of Desktop Based GIS application	1	Lot	35.40					
6	Implementation cost of GIS Mobile application	1	Lot	35.40					
		B. Su	b-Total	1161.12					
C. Add	litional Miscellaneous Components								
-1	Large Display Screen (Minimum 55") for NMS/	2	N.T.	2.71					
1	Monitoring Software Display	2	No.						
	Server Rack minimum 42 U with dual IPDU, cable			71.41					
2	manager, FAN and perforated front and back door,	12	No.	/1.41					
	2 nos. iPDU etc. (6 nos. racks in DC and 6 nos. in DR)								
		C. Su	b-Total	74.12					
	·	Total (A	Total (A+B+C)						

(2) The Petitioner under the Facts of the Case has submitted that earlier an investment approval of Rs. 164 Cr. for IT/OT works under loss reduction category of RDSS scheme was accorded to it, which included the works amounting to Rs. 122.25 Cr. under billing (MBC works) as mentioned below:-

S. No.	Particulars	Sanctioned Amount (Rs. Cr.)
	Hardware and System Software	
1	refresh/upgrade of Data Centre, Disaster	64.80
	Recovery Centre	
2	Application Software (MBC and other	30.92
_	Software)	30.72
3	GPS based GIS survey of assets, mapping	26.53
3	and digitization	20.55
	Total	122.25

In this context, understanding the need to address the rapidly increasing cyber security incidences, cyber security compliances and present requirements of GIS under RDSS, the additional cyber security and GIS software components were included by the Petitioner in its tender/RFP with estimated cost of Rs. 26.05 Cr. alongwith the works amounting to Rs. 122.25 Cr. under billing (MBC works).

Post tendering the L1 bidder was identified as M/s Infinite Computer Solutions (India) Ltd. and discovered the L1 price for billing (MBC) works as Rs. 131.22 Cr. against the works amounting to Rs. 122.25 Cr. Further, with regard to the additional cyber security, GIS software and additional miscellaneous components, the L1 price discovered was Rs. 31.97 Cr. against estimated Rs. 26.05 Cr. Furthermore, the Board of Directors (BoD) of the Petitioner, in its 123rd meetings, had accorded its approval for the aforesaid works amounting to Rs. 31.97 Cr.

(3) The Petitioner in its submission dated 15.09.2025 has furnished the itemwise status of works against the IT/OT works of estimated cost of Rs. 164 Cr. under RDSS as approved by the Commission in its Order dated 19.10.2023 as detailed below:-

S No.	Particulars	Amount (Rs. Cr.)	Cost (Rs. Cr.)	Difference/Yet to be awarded (Rs. Cr.)	Financial Progress	Current Status of Implementation	
а	b	c	d	E=c-d		F	
	mplementation of	^e Utility Billi	ng System				
1	Hardware and System Software refresh/upgrade of DC, DR	64.80	83.96			As-is study of the system has been completed. To be process phase is going on. BoQ approval for the project	
2	Application Software (MBC and other software's)	30.92	29.09			has been completed. Vendor did not claim the advance payment.	
3	GPS based GIS survey of assets, mapping and digitization	26.53	18.17				
	b-Total (1+2+3)	122.25	131.22	(8.97)	0.0		
B. E	RP Additional Sc	oftware Licen	ices and Ha	ırdware			
4	RT-DAS Implementation	22.26	15.47	6.79	10.45	RT-DAS control center work has been completed and 168 Nos. of substations out of 215 Nos. sub stations has been successfully integrated with control center till date	
5	ERP Additional Software Licences and Hardware	07.95	02.21	5.74	2.21	SAP Licences Procured, RFP for Hardware Upgradation to be invited again earlier RFP scrapped due to high cost.	

S No.	Particulars	Sanctioned Amount (Rs. Cr.)	Awarded Cost (Rs. Cr.)	Difference/ Yet to be awarded (Rs. Cr.)	Financial Progress	Current Status of Implementation
а	b	С	d	E=c-d		F
6	Difference of ERP Cost Approved Under IPDS and ERP Cost Short- closed- To be subsumed in RDSS		13.73	(2.23)	11.44	Project under O&M w.e.f. – 01/09/2024
Sui	b-Total (4+5+6)	41.71	31.41	10.30	12.66	
	Total	163.96	162.63	1.33	12.66	

(4) The Commission has observed that the Petitioner in its instant Petition has proposed works amounting to Rs. 31.97 Cr. in addition to the works amounting to Rs. 164 Cr. (as detailed at Para (3) above). Accordingly, to ascertain that there is no duplicity between the works proposed in the instant Petition and the IT/OT works amounting to Rs. 164 crore proposed under the RDSS, the Commission raised a query in this regard. In response, the Petitioner confirmed that there is no duplicity between the works proposed in the instant Petition and the IT/OT works proposed /implemented earlier by it.

Further, the Petitioner submitted that the proposed cyber security works in the instant Petition were not implemented earlier nor considered under the initial RDSS scope because the Detailed Project Report (DPR) for IT/OT works under RDSS was prepared in October 2021. Subsequently, following the issuance of guidelines and regulations by CEA, CERT-IN, NCIIPC, CSIRT Power, ITDA/GoU, and other agencies, the Petitioner has proposed the aforesaid cyber security works in addition to the IT/OT works.

- (5) With regard to financing for the project, the Petitioner vide its submission dated 22.11.2025 has submitted that the financing for the said works would be arranged from its own resources or through lending from banks/ Financial Institutions in the ratio of 70:30 (Debt: Equity).
- (6) With regard to the project completion period, the Petitioner in its submission dated 15.09.2025 has submitted that the proposed works would be completed within 12 months.

(7) With regard to the Cost-Benefit Analysis, the Petitioner, in its submission dated 22.11.2025, stated that the proposed cyber security works are essential for safeguarding sensitive and confidential data, preventing potential financial and operational losses arising from cyber incidents, ensuring business continuity, maintaining consumer confidence, and complying with statutory and regulatory requirements. Moreover, the proposed GIS software works are expected to result in more efficient field operations, improved network planning, optimized maintenance, and reduced downtime, thereby enhancing consumer services and overall consumer satisfaction. Furthermore, GIS implementation is a critical component for becoming future-ready for smart grid operations in the power distribution sector, particularly in the context of widespread smart meter deployment, RT-DAS implementation, and proposed SCADA implementation. Therefore, the Cost-Benefit Analysis for the proposed investment cannot be quantified in monetary terms.

In this context, the Commission has observed that no quantifiable/tangible benefits are envisaged from the instant project. However, the Commission is of the view that the works proposed by the Petitioner are vital from the perspective of advancement in IT/OT infrastructure to tackle with the ongoing and future cyber security threats.

(8) With regard to the different components of Cyber Security, GIS and other miscellaneous works, the work-wise observations and views of the Commission are mentioned below:-

A. <u>Cyber Security components</u>

(i) With regard to the Cyber Security components, on examination of the data center network architecture diagram of existing vis-a-vis proposed works, the Commission observed that the Petitioner had initially planned for firewalls, Zero Trust Network Architecture (ZTNA), Advance Persistent Threats (APTs) and Security Information & Event Management (SIEM) components etc. for cyber security against the IT/OT works and in addition to the same, the

Petitioner has now proposed components for cyber security amounting to Rs. 19.62 Cr. in its instant Petition.

Further, the Petitioner provided detailed configuration/ specifications/ subscriptions and importance of all the proposed Cyber Security components as detailed below:-

S.	Components	3.5.1	Licences (User/		Hardware/	
No.	Make	Make	Functionality/ Qty)	Warranty (Year)	Software	
		Cisco	6	5	Hardware	
1	Compute Servers	required for Information (SIEM) + C	ortance: - 6 not installation and and Event Mana ollector, SOAR etion, Web Security	configuration agement Orchestrator	of Security, HIPS, End	
	Security	Trend Micro	5 Analyst	5	Software	
2	Orchestration, Automation, and Response (SOAR)	Need/Importance:- 1 no. SOAR licence (with 5 analyst) is required for Automated Incident Response, Threat Intelligence & Indicators of Compromise (IOC) Enforcement, Enhanced Security Posture, Improved Incident Response, Real-Time Monitoring & Dashboards.				
		Trend Micro	1500	5	Software	
3	Extended Detection and Response (XDR)	Need/Importance: - 1500 nos. licences of XDR are				
		Trend Micro	150	5	Software	
4	Host-based Intrusion Prevention System (HIPS)	Need/Importance:- 150 nos. licences are required for systems for Real-time behavioural analysis to detect and prevent malicious execution, Application control to restrict the running of unauthorized software, Protection against insider threats, advanced persistent threats (APTs), and zero-day exploits, Enforcement of security policies per server role (e.g., web server, database, file server), Virtual patching of O.S. and application vulnerabilities.				
	Network	Trend Micro	10 Gbps TP & 15K Signatures	5	Hardware	
5	Intrusion Prevention System (NIPS)	Need/Importance: - 1 no. NIPS is required for Inline Threat Detection & Blocking, Deep Packet Inspection, Signature & Anomaly-Based Detection, Real-Time Alerts & Reporting, Integration with SIEM and Protocol Validation & Attack Signature Matching.				

S. No.	Components Make	Make	Licences (User/ Functionality/ Qty)	Subscription/ Warranty (Year)	Hardware/ Software	
		Trend Micro	1500	5	Software	
6	End Point Protection (EPP)	rotection Need/Importance: - 1500 nos. licences of EPP				
		Trend Micro	1250	5	Software	
7	Web Security	Need/Importance: - 1250 nos. licences of Web Security are required for systems for Web Traffic Logging & Monitoring, Secure internet access for servers (for updates and security patch installations), URL Filtering, Protecting against web-based threats, Block access to malicious or unauthorized websites.				
		Trend Micro	800000 emails/day	5	Software	
8	il Security is il Gateway, nam & Anti- nd-to-End &					
9	DDoS (Distributed Denial of	Radware	DDoS prevention rate-25 million packets per second	5	Hardware	
	Service)					
10	Security audit of entire new applications, mobile apps including hardware, network, and application Grey box testing, Vulnerability Assessment and Penetration Testing (VAPT) etc. from Indian-Computer Emergency Response Team (CERT-In) empaneled agency.					
11	Development of Cyber Security Policy, Data Privacy Policy, IT usage policy and backup policy etc. for UPCL in line with CEA/CERT-in guidelines.					
12	Development of Information Security Management System (ISMS) policy and ISO certification 27001 or higher of UPCL Data Center and Disaster Recovery Center.					

(ii) With regard to Cyber Security, the Commission opines that the State Government agency of Uttarakhand i.e. Information Technology Development Agency (ITDA) has recommended the adoption of a Cyber Security system based on Zero Trust Architecture (ZTA) which works on the principle of "never trust, always verify," and enforces strict authentication, authorization, and least-privilege

access to minimize risks, along with other key features that enhance overall system security.

In this context, the Petitioner stated that all cybersecurity components proposed in the Petition including Network Security (NIPS, DDoS, Web), Data Security (HIPS, EPP, Email Security, XDR), Application Security (WAF, Web Security, HIPS), and Monitoring & Automated/Manual Response (XDR, SIEM, SOAR) are adequately covered in the proposed solution.

(iii) In response to the Commission's query with regard to GoU Order for constitution of expert committee for IT works exceeding 5 Cr., the Petitioner informed that "UPCL is not governed by the Uttarakhand government's order no. 307801 dated 19.06.2025 as the same is applicable to all the Govt. departments, Boards and State Govt. Financed autonomous institutions while it does not fall in this category."

However, considering national importance of cyber security in power sector and the substantial financial outlay of ₹31.97 crore involved in the IT works proposed in the instant Petition, the Commission is of the view that, although the L1 rate has been discovered, the Petitioner, prior to award of the contract, shall constitute a monitoring committee for providing the necessary overview and validation of the proposal with regard to compliance of guidelines/Orders of CEA, CERT-IN, NCIIPC, CSIRT Power, ITDA, NeGD and GoU etc.

(iv) With regard to the Petitioner confirmation that the proposed works in the instant Petition comply with the requirements and specifications prescribed under various guidelines and Orders issued by CEA, CERT-IN, NCIIPC, CSIRT Power, ITDA, NeGD, GoU, and other relevant authorities, the Commission directs the Petitioner to ensure strict adherence to all such applicable guidelines and standards during the implementation of the proposed works and to maintain compliance throughout the lifecycle of the project.

- (v) With regard to email-data migration to '@uk.gov.in' platform, the Petitioner submitted that it is presently in consultation with NIC to obtain clarity regarding the process of email-data migration and other related requirements for utilizing the '@uk.gov.in' email platform. At this stage, it is not in a position to confirm whether it would be able to adopt or use the '@uk.gov.in' email solution being provided by NIC. The Commission directs the Petitioner to continue its efforts in this regard and adopt the most suitable & secure solution based on the outcome of its consultation with NIC.
- (vi) With regard to the Cyber Security components proposed by the Petitioner in its instant Petition, the Commission opines that the Petitioner being a technical and commercial entity having various applications viz. power system operation, finance & accounts, consumer billing, Real Time Data Acquisition & Control etc. which totally rely on IT infrastructure. Moreover, the GoU has identified SCADA and Distribution Management System (DMS) of the Petitioner as the critical information infrastructure. Therefore, ensuring the Cyber Security is vital for limiting and isolating the potential internal/external Cyber threats which can not only endanger the operations but also the commercial & financial functioning of the Petitioner especially due to threats arisen from global/cross border in its IT/OT network. Acknowledging the same, the Commission is of the view that due to emerging new horizons of threat environment, it is prudent to upgrade the IT/OT infrastructure by installing critical Cyber Security components.

B. GIS components

(i) The Petitioner has proposed GIS components amounting to Rs. 11.61 Cr. as mentioned below:-

S. No.	Item description	Qty	Unit	Total Quoted Cost (Including GST) Rs Lakhs
1	Software Licences for GIS work complete including server licences for hosting GIS application and minimum 4 concurrent desktop user for working on GIS server and other licences of subsystem to run GIS application for all user of UPCL with software support from OEM till GO-LIVE of system	1	Lot	826.00
2	Third party Data integration of Consumer Data & LT Network (AMISP etc.) including validations and QA/QC	1	Lot	14.16
3	One time data migration cost for transferring, validating, QA/QC of UPCL existing GIS data to new developed GIS application	1	Lot	14.16
4	Implementation cost of Web based GIS Application	1	Lot	236.00
5	Implementation cost of Desktop Based GIS application	1	Lot	35.40
6	Implementation cost of GIS Mobile application	1	Lot	35.40
_		B. Su	b-Total	1161.12

With regard to the GIS components, it has been observed that previously the GIS components covered under IT/OT works of RDSS schemes were mainly related to field survey activities of HT electrical networks. concerned assets and its mapping/digitalization. However, the existing GIS software is of M/s ESRI which was procured under R-APDRP/IPDS projects and has certain limitations w.r.t. undergrounding networks. For the purpose of fulfilment of requirement of GIS for undergrounding cabling proposed under ADB scheme in Dehradun town and further extension in Haridwar, Haldwani, Rishikesh etc., the latest version of GIS software would be required. Therefore, the Petitioner in its instant Petition has proposed the upgradation of existing GIS software to the latest standards/procurement of latest version of GIS

(ii)

software with feature of undergrounding network. The major items of GIS component of instant Petition are 'Licences for GIS work' and 'Implementation cost of Web based GIS Application' amounting to Rs. 8.26 Cr. and Rs. 2.36 Cr. respectively.

view regard, the Commission is of the that mapping/digitalization of the assets in GIS software is not a onetime activity and the same calls for regular upgradation of the assets as and when the same are capitalized/put to use. Therefore, the Commission directs the Petitioner to map/digitalize all its existing assets including overhead & underground network viz. HT lines, LT lines, DTs, LT capacitor banks, HT poles, LT poles, 33/11 kV Substations etc. and its consumers. Further, Petitioner is required to regularly update the new assets and consumers in its GIS software so that the database of the Petitioner can be readily used for the effective planning & designing of the network for ensuring accessibility, reliability & quality power supply for the consumers.

(iii) With regard to the Commission's query to rigorously pursue the funding of the proposed works in the instant Petition under the RDSS Scheme, the Petitioner, referring to the minutes of the 50th Monitoring Committee meeting of the Ministry of Power (MoP) dated 12.08.2025, submitted that no new works are presently being sanctioned under the RDSS, and therefore, the chances of obtaining additional funding for the proposed Cyber Security and GIS components are almost nil.

In this context, the Commission observes that recently the works pertaining to 'undergrounding of HT/LT networks in Rishikesh with SCADA automation in the Ganga Corridor areas' have been sanctioned by the MoP under the RDSS Scheme in its 50th Monitoring Committee meeting. Further, the GIS-related works proposed in the instant Petition are intended to upgrade the existing GIS software to map/digitalize the underground cabling network including

undergrounding of HT/TL networks in Rishikesh which has been recently sanctioned by MoP under RDSS scheme.

In this context, the Commission is of the view that the submission of the Petitioner that possibility of sanction of the proposed works under the RDSS is Nil is incorrect as recently an approval has been bestowed to the Petitioner as discussed above. Therefore, the Petitioner is directed to make all efforts for seeking sanction of the proposed works through RDSS Scheme of the MoP.

(iv) With regard to the GIS component, it has been observed that the existing GIS software is not capable of handling additional features such as mapping/digitalization of underground cabling and also has limitations with respect to its upgradation. In this regard, the Commission opines that GIS components as proposed by the Petitioner if implemented with true intent can result in effective network planning & designing, optimization of maintenance, consumer indexing, asset management, voltage-wise asset mapping, swift redressal of consumer complaints etc. which can help the Petitioner in numerous ways including enhancing its operational efficiency and consumers satisfaction. Besides above, the effective GIS implementation in the network can help in identifying the voltage-wise cost of supply for the Petitioner.

C. <u>Additional Miscellaneous Components</u>

(i) The Petitioner has proposed Additional Miscellaneous Components amounting to Rs. 0.74 Cr. as mentioned below:-

S. No.	Item description	Qty	Unit	Total Quoted Cost (Including GST) Rs Lakhs
1	Large Display Screen (Minimum 55") for NMS/ Monitoring Software Display	2	No.	2.71

S. No.	Item description	Qty	Unit	Total Quoted Cost (Including GST) Rs Lakhs
2	Server Rack minimum 42 U with dual IPDU, cable manager, FAN and perforated front and back door, 2 nos. iPDU etc. (6 nos. racks in DC and 6 nos. in DR)	12	No.	71.41
		74.12		

- (ii) The Commission observed that the above said 02 large format displays with Network Monitoring feature will be used for large display activities and 12 Racks would be utilized for integration of hardware at Data Center (DC) and Disaster Recovery (DR).
- (9) With regard to the overall compatibility of the proposed works in the instant Petition with existing IT/OT infrastructure of the Petitioner, the Commission cautioned the Petitioner to ensure provision of scalability, upgradation, interoperability and resilience of its existing and proposed IT/OT infrastructure.
- (10) As discussed at Para 10(2) above of this Order, the Petitioner has discovered the price of the works proposed in the instant Petition to Rs. 31.97 Cr. While, as per Regulation 40 of UERC (Conduct of Business) Regulations, 2014, prior approval of the Commission is mandatory for investments by the distribution licensee that exceed the prescribed limits laid down by the Commission. Such non-compliances cannot be taken lightly and require strict action against the delinquent. This cannot be a blanket justification for the violation of the Regulations that the proposed works is the additional IT/OT works that was already approved by the Commission.

However, considering the present circumstances, the Commission feels that the Petitioner must be warned before taking any penal action. Therefore, we warn the Petitioner that it should not violate the Regulations in future and such violation would entail consequential penal action. The Commission understanding gravity of the complex Cyber Security threats arisen in today's context and importance of upgradation of existing GIS software, the Commission has taken a lenient view towards consideration of the proposal and warns the Petitioner, not to repeat such acts/actions in future, failing which such proposals would be liable for rejection and appropriate penal action would be initiated against the responsible officers. The Commission further cautions the Petitioner that all proposals are submitted before the Commission well in advance for its approval.

Further, approval at this stage i.e. discovery of the L1 price in the instant matter before obtaining in-principle approval of the Commission, is in a way a *post-facto* approval and is being allowed as a special case keeping in view the necessity of cyber security in the network and importance of GIS software. The lenient view and consideration taken by the Commission while granting the instant proposals are due to peculiar and special circumstances and should not be taken as precedence for investment approval application before the Commission. The Commission shall strictly deal with the matter in accordance with the provisions of the Regulations in this regard.

(11) With regard to the Commission's specific query on categorizing each item proposed in the instant Petition as either Capex or Opex, the Petitioner submitted that the item titled "Security audit of entire new applications, mobile apps including hardware, network and application grey box testing, VAPT, etc. from a CERT-In empaneled agency," amounting to ₹11.80 lakh under the Cyber Security components, is of Opex nature, while all other items proposed in the instant Petition are of Capex nature.

In this regard, the Commission does not find it prudent to approve the aforesaid work amounting to ₹11.80 lakh under capital expenditure, as the same constitutes operational expenses and can be met by the Petitioner from its routine Operation & Maintenance (O&M) expenses. Accordingly, the Commission is deducting this amount from the proposed capital works. The works proposed by the Petitioner that fall under the category of capital expenditure, along with their respective costs, are stated below

S. No.	Item description	Qty	Unit	Total Quoted Cost (Including GST) Rs Lakhs		
A. Cyber Security Components						
1	Compute /server	6	No.	141.60		
2	SOAR (Security Orchestration Automation and Response)	1	No.	108.56		
3	XDR (Extended Detection & Response)	1	No.	260.84		
4	HIPS (Host Intrusion Prevention System)	1	No.	230.13		
5	NIPS (Network Intrusion Prevention system)	1	No.	212.99		
6	End Point Protection (EPP) (Antivirus)	1	Lot	202.99		
7	Web Security	1	No.	177.00		
8	E-mail Security	1	No.	226.56		
9	DDoS (Distributed Denial of Service)	2	No.	354.00		
10	Development of Cyber security policy, Data Privacy policy, IT usage policy and backup policy etc. for UPCL in line with CEA/CERT-in guidelines	1	Lot	11.80		
11	Development of ISMS policy and ISO certification 27001 or higher of UPCL Data Center and Disaster Recovery Center	1	Lot	23.60		
		. Sub	-Total	1950.07		
B. G	GIS Components	1	<u> </u>			
1	Software Licences for GIS work complete including server licences for hosting GIS application and minimum 4 concurrent desktop user for working on GIS server and other licences of subsystem to run GIS application for all user of UPCL with software support from OEM till GO-LIVE of system	1	Lot	826.00		
2	Third party Data integration of Consumer Data & LT Network (AMISP etc.) including validations and QA/QC	1	Lot	14.16		
3	One time data migration cost for transferring, validating, QA/QC of UPCL existing GIS data to new developed GIS application	1	Lot	14.16		
4	Implementation cost of Web based GIS Application	1	Lot	236.00		
5	Implementation cost of Desktop Based GIS application	1	Lot	35.40		
6	Implementation cost of GIS Mobile application	1	Lot	35.40		
	В	. Sub	-Total	1161.12		

S. No.	Item description		Unit	Total Quoted Cost (Including GST) Rs Lakhs		
C. A	C. Additional Miscellaneous Components					
1	Large Display Screen (Minimum 55") for NMS/ Monitoring Software Display	2	No.	2.71		
2	Server Rack minimum 42 U with dual IPDU, cable manager, FAN and perforated front and back door, 2 nos. iPDU etc. (6 nos. racks in DC and 6 nos. in DR)	12	No.	71.41		
	C. Sub-Total			74.12		
	Total (A+B+C)			3185.31		

With regard to the O&M expenses, the Commission has observed that the Petitioner has envisaged the 'Cyber Security Component' as a package covering generally a subscription/warranty period of 05 years. The Commission opines that prima-facie the expenditure against the said subscription/warranty period of 05 years qualifies as operational expenses. However, considering the latest trends in technology and cyber security threats, it would be prudent to consider the aforesaid proposal as package as envisaged by the Petitioner. However, the Commission cautions the Petitioner to make its all efforts for optimizing the recurring O&M expenses in its IT/OT networks.

- (12) In light of the above, the Commission hereby grants *post-facto* approval for the works stated in aforesaid Para (5), subject to the strict fulfillment of the terms and conditions mentioned below: -
 - (i) The Petitioner is directed to negotiate with the L-1 bidder for obtaining most economical prices from the bidders under the prevailing Rules & Regulations.
 - (ii) The Petitioner shall, within one month of the Order, submit letter from the State Government or any such documentary evidence in support of its claim for equity funding (if any) agreed by the State Government or any other source in respect of the proposed schemes.
 - (iii) The Petitioner, prior to award of the contract, shall constitute a monitoring committee for providing the necessary overview and validation of the proposal with regard to compliance of

guidelines/Orders of CEA, CERT-IN, NCIIPC, CSIRT Power, ITDA, NeGD and GoU etc.

Further, the Petitioner is directed to ensure strict adherence of all guidelines and Orders issued by CEA, CERT-IN, NCIIPC, CSIRT Power, ITDA, NeGD, GoU, and other relevant authorities during the implementation of the proposed works and to maintain compliance throughout the lifecycle of the project.

- (iv) The Commission directs the Petitioner to consult all Security Audit reports of the IT/OT infrastructure with ITDA, and to ensure effective Third-Party Risk Management (TPRM) for identifying and mitigating vendor/supplier/partner related risks to maintain cybersecurity, compliance, and operational integrity.
- (v) The Petitioner is directed to continue its efforts with regard to consultation with NIC for utilization of '@uk.gov.in' email platform and adopt the most suitable & secure solution based on the outcome of its consultation with NIC.
- (vi) The Petitioner is directed to strictly perform Vulnerability Assessment and Penetration Testing (VAPT) of their infrastructure on regular basis to identify and exploit security weaknesses in systems, applications, and networks to strengthen defences.
- (vii) The Petitioner is directed to establish, document, implement, and maintain frequent cyber security training program for personnel having authorized cyber or authorized physical access (unescorted or escorted) to their Critical infrastructure and ensure access for only authorized trained personnels. Also, all Personnel engaged in O&M of IT & OT Systems shall mandatorily undergo courses on cyber security of Power Sector from any of the training institute designated by CEA.
- (viii) The Petitioner is directed to map/digitalize all its existing assets including overhead & underground network viz. HT lines, LT lines, DTs, LT capacitor banks, HT poles, LT poles, 33/11 kV Substations

- etc. and its consumers. Further, Petitioner is required to regularly update the new assets and consumers in its GIS software so that the database of the Petitioner can be readily used for the effective planning & designing of the network for ensuring accessibility, reliability & quality power supply for the consumers.
- (ix) The Petitioner is directed to maintain comprehensive inventory list of software, devices, operating systems & its versions and networks. Further, the Petitioner is directed to have Patch Management policy as per government compliances.
- (x) The Petitioner is directed to have incident response plan, business continuity plan, mock drills for better cyber security.
- (xi) All the loan conditions laid down by the funding agency under Scheme are strictly complied with. Further, Petitioner is directed to make all efforts for seeking grants/soft loan for works proposed under instant Petition through MoP under RDSS or NeGD etc.
- (xii) CAMC contract (if any) be framed in order to ensure highest degree of Service Level Agreement (SLA) with appropriate Liquidated Damages (LD) clause for compensating the Petitioner against default in agreed SLA.
- (xiii) The Commission may verify/check the proposed works to be executed by the Petitioner at any point of time during/post execution of the works from the perspective of not only substantiating that the assertions & commitments made by the Petitioner have been fully complied and correct, but also to assess Quality, Optimum utilization of resources, Benefits accrued from the proposed investments etc. as has been projected by the Petitioner.
- (xiv) Post execution of the project, the Petitioner shall submit the Project Completion Report to the Commission alongwith expenditure incurred/completed cost, financing of the Project and detailed analysis & calculations of the benefits accrued from the proposed investments etc.

- (xv) The cost of servicing the project cost shall be allowed in the Annual Revenue Requirement of the Petitioner after the assets are capitalized and subject to prudence check of cost incurred.
- (13) The approval is given subject to the above conditions and on the basis of submissions and statement of facts made by the Petitioner in the Petition under affidavit. In case of violations of any of the condition mentioned above or in case any information provided, if at any time, later, found to be incorrect, incomplete or in case relevant information was not disclosed, that materially affects the basis for granting the approvals, in such cases, the Commission may cancel the approval or refuse to allow all, or part of the expenses incurred in the ARR/True-up apart from initiating plenary action.

Ordered accordingly.

(Prabhat Kishor Dimri) Member (Technical) (Anurag Sharma) Member (Law) (M.L. Prasad) Chairman