



**PERFORMANCE AGREEMENT**

**BETWEEN**

**Secretary and Director**

**DEPARTMENT OF HYDROPOWER AND POWER SYSTEMS  
MINISTRY OF ECONOMIC AFFAIRS**

**(July 1, 2018 – June 30, 2019)**

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## **Preamble**

The Performance Agreement is entered into between the Secretary and Director, Department of Hydropower and Power Systems.

The objectives of this Performance Agreement are:

- a) To establish clarity and consensus about annual priorities for the Department and other other power sector consistent with the 12th Five Year Plan of the Ministry, and Government's other priorities;
- b) To make the Department and other power sector agencies fully responsible for driving implementation and delivering the results against the annual priorities; and
- c) To provide an objective and fair basis for evaluating the overall performance of the at the end of the financial year

The Performance Agreement represents an important accountability mechanism for inculcating a performance based culture at all levels of government.

**THEREFORE**, the parties hereto agree as follows:

## **Section 1: Vision, Mission and Objectives**

### **Vision**

A dynamic and efficient Government agency committed to promoting sustainable hydropower for socio-economic development in pursuit of Gross National Happiness.

### **Mission**

- Govern and facilitate integrated, regionally balanced and optimal use of water resource for development of hydropower with minimal environment impacts.
- Ensure that hydropower exports generate maximum revenue for the Nation.
- Ensure secure, reliable and affordable energy for the domestic consumers.
- Provide enabling environment for participation of public and private sectors in development and construction of hydropower resource.
- Undertake Institutional reforms for efficient planning and management of the sector.
- Develop and enhance professionals in hydropower development and management.

### **Objectives**

- 1) To optimize hydropower development and enhance energy and water security.

## Section 2: Objectives, Success Indicators & Target

Objective	Weight	Action	Success Indicator	Unit	Weight	Excellent [100%]	Very Good [90%]	Good [80%]	Fair [70%]	Poor [60%]
To optimize hydropower development and enhance energy and water security.	100	EJG meetings to expedite construction of 10GW HPPs	Coordination for EJG Meeting and Management of the Secretariat	Status of Work	2	Request for EJG meeting sent and Secretariat Budget prepared on time.	Secretariat Budget prepared on time.	Budget proposal submitted to Chairman. Draft agenda circulated to RGoB members.	Draft agenda finalized.	Request for EJG meeting cleared by Chairman.
		Construct HPPs	Construction of Puna-I monitored	Status of Work	1	Major construction issues appraised	Updated reports submitted on need basis	Monthly Progress Report (MPR) reported	MPR analyzed	MPR sought
			Construction of Puna-II monitored	Status of Work	1	Major construction issues appraised	Updated reports submitted on need basis	Monthly Progress Report (MPR) reported	MPR analyzed	MPR sought
			Compliance of CA for Nikachhu monitored	Status of Work	3	Annual compliance report submitted to Department	Compliance report prepared and issued	Undertaken field visits to assess CA compliance	Finalized and conveyed the work plan	Initiated and prepared work plan
			Construction of Kholongchhu monitored	Status of Work	1	Major construction issues appraised	Updated reports submitted on need basis	Monthly Progress Report (MPR) reported	MPR analyzed	MPR sought
			Compliance of CA for Dagachhu monitored	Status of Work	3	Annual compliance report submitted to Department	Compliance report prepared and issued	Undertaken field visits to assess CA compliance	Finalized and conveyed the work plan	Initiated and prepared work plan

	Implementation of Sankosh HEP	Status of Work	5	Final draft submitted to the Ministry	Final draft Agreement submitted for legal vetting	Draft Agreement taken up with Gol	Draft Agreement submitted to the Cabinet	Agreement drafted
Conduct investigation studies of new HPPs	DPR Study of 363 MW Khomachhu HEP initiated	Status of Work	4	Final ToR submitted to Department	Draft TORs for the field investigation works prepared	Prepare the Draft TORs for carrying out ESIA of the project	Literature review conducted	Ground works for ToR preparation initiated
	Identification of one project for Pre-feasibility study	Status of Work	3	PFS project submitted to the Dept	Project for PFS presented to the Department	Project for PFS identified through MCA	Conduct field visit to potential sites	Information and Data for MCA collected
	Preparation of Kuri-Gongri DPR undertaken	Status of Work	4	11th QPR submitted	10th QPR submitted	9th QPR submitted	8th QPR submitted	7th QPR submitted
Preparation of Standards/Manuals/Guidelines/ToRs	ToR for Reconnaissance studies prepared	Status of Work	4	ToR submitted to Department	Presented to the Department	Draft ToR prepared	Draft ToR initiated	Literature reviewed
Commissioning of Mangdechhu HEP	Participated in the testing and commissioning of Mangdechhu HEP	Status of Work	4	Compiled and submitted reports of Testing & Commissioning to the Department	Participated in the testing and commissioning activities	Reviewed and prepared for project component testing	Visited and finalized the work plan	Initiated and prepared work plan
Construct HV Transmission lines	Construction of 132 kV Kanglung – Phunshothang line completed	Status of Work	2	12 monthly progress reports received	10 monthly progress reports received	8 monthly progress reports received	7 monthly progress reports received	6 monthly progress reports received
Export tariff negotiation	Export tariff for Mangdechhu	Status of Work	5	Draft tariff Protocol	Tariff submitted to	Negotiations with Gol held	Tariff proposal	Tariff proposal

	negotiated			submitted to Ministry	Ministry		finalized	prepared
Updation of Power System Master Plan 2003	Formulation of Power System Master Plan of Bhutan - 2040 undertaken	Status of Work	5	Draft Final Report submitted	Draft Final Report preparation initiated	Interim report submitted	2 nos. of QPRs submitted	1 no. of QPR submitted
Amendment of Electricity Act, 2001	Electricity Act, 2001 revised	Status of Work	1	Revised draft submitted to OAG for legal vetting	Revised draft submitted to the Ministry	Regulatory Impact Assessment undertaken	Stakeholder consultation held	Presented to Ministry's PPCC
Review of Sustainable Hydropower Development Policy 2008	Sustainable Hydropower Development Policy revised	Status of Work	1	Submitted to the Ministry	Drafted Policy action plan	concept note submitted to GNHC	Stakeholder consultation held	Presented to the Ministry's PPCC
Submission of Hydropower Development Strategy report	Submitted Hydropower Development Strategy report to the RGoB	Status of Work	5	Submitted to Cabinet	Submitted to Ministry	Draft appraisal note Prepared	Consultations held with Hydropower Committee	Study of HDS report initiated
SAARC/BIMSTEC/SASEC/ERPC	Participation in meetings/workshops of SAARC/BIMSTEC/SASEC/ERPC	Number	2	6	5	4	3	2
BPSCC meeting conducted	Number of BPSCC meeting held	Number	5	One Meeting held	Agenda circulated	Agenda finalized	Agenda called	Request for meeting sent
Publication of annual power system information	Annual power system data published	Date	5	03/31/2019	04/10/2019	04/20/2019	04/30/2019	06/30/2019

National Power System Load Flow Studies	Annual National Load Flow Studies using PSS/E software for transmission lines of 66kV and above undertaken	Status of Work	5	Simulation reports for two seasons (dry & wet) submitted	Simulation for two seasons (dry & wet) conducted	Simulation for one season (dry/wet) conducted	Data collected and analyzed	Data collection initiated
	Study and assessment of the electricity demand forecasting (2019-2040) undertaken	Status of Work	5	Report submitted to Department	Reviewed within the division	Data analyzed	Data compilation completed	Data collection initiated
Management of PDMS	PDMS Data uploaded into the system as per schedule	Status of Work	4	up-to-date data in the system	data and data format verified	Complete data received from utilities	notified utilities on the missing data	data not received
	Number of Substation users trained	Number	5	16	14	12	10	8
Updation of Electricity file of Budget, Policy and Fiscal Framework Statement	Updated on quarterly basis	Number	4	4	3	2	1	0
Jobs creation in Hydropower construction	Number of jobs created in hydropower construction	Number	0.5	2653	2600	2500	2450	<2450
Total firm power generation enhanced	MW of total firm power generated	Number	5	410	-	-	-	<410
Increase in Hydropower Installed capacity	Increase in Hydropower installed capacity in MW	Number	5	2326	-	-	-	<2326
Hydropower (Water) security ensured	Improvement in hydropower efficiency	Percent	0.5	99.9	99.9	99.9	99.9	<99.9



			(water utilization factor)							
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### Section 3: Trend values of success indicators

Objective	Action	Success Indicator1	Unit	Actual Values [FY 2018-19]	Actual Values [FY 2019-20]	Target Values [FY 2020-21]	Projected Values [FY 2021-22]	Projected Values [FY 2022-23]
To optimize hydropower development and enhance energy and water security.	National Power System Load Flow Studies	Annual National Load Flow Studies using PSS/E software for transmission lines of 66kV and above undertaken	Status of Work				Simulation reports for two seasons (dry & wet) submitted	Simulation reports for two seasons (dry & wet) submitted
		Study and assessment of the electricity demand forecasting (2019-2040) undertaken	Status of Work				Report submitted to Department	
	SAARC/BIMSTEC/SASEC/ERPC	Participation in meetings/workshops of SAARC/BIMSTEC/SASEC/ERPC	Number				6	
	Amendment of Electricity Act, 2001	Electricity Act, 2001 revised	Status of Work				First draft submitted to Ministry	Revised draft submitted to OAG for legal vetting
	BPSCC meeting conducted	Number of BPSCC meeting held	Number				One Meeting held	
	Commissioning of Mangdechhu HEP	Participated in the testing and commissioning of Mangdechhu HEP	Status of Work				Compiled and submitted reports of Testing & Commissioning to the Department.	
	Conduct investigation studies of new HPPs	DPR Study of 363 MW Khomachhu HEP initiated	Status of Work				Final ToR submitted to Department	

	Identification of one project for Pre-feasibility study	Status of Work					PFS project submitted to the Dept
	Preparation of Kuri-Gongri DPR undertaken	Status of Work				75.03% progress achieved.(6th QPR submitted)	11th QPR submitted
Construct HPPs	Compliance of CA for Dagachhu monitored	Status of Work					Annual compliance report submitted to Department
	Compliance of CA for Nikachhu monitored	Status of Work					Annual compliance report submitted to Department
	Construction of Kholongchhu monitored	Status of Work			5	10.8	Major construction issues apprised
	Construction of Puna-I monitored	Status of Work	74	79	83	84.5	Major construction issues apprised
	Construction of Puna-II monitored	Status of Work	62	67	72	77.5	Major construction issues apprised
	Implementation of Sankosh HEP	Status of Work					DPR approved by the Ministry Final draft submitted to the Ministry
Construct HV Transmission lines	Construction of 132 kV Kanglung – Phuntshothang line completed	Status of Work	10	30	63	87.29	12 monthly progress reports

							received
EJG meetings to expedite construction of 10GW HPPs	Coordination for EJG Meeting and Management of the Secretariat	Status of Work				Request for EJG meeting sent	Request for EJG meeting sent and Secretariat Budget prepared on time.
Export tariff negotiation	Export tariff for Mangdechhu negotiated	Status of Work				4 rounds of Tariff negotiation meeting held	Draft tariff Protocol submitted to Ministry
Hydropower (Water) security ensured	Improvement in hydropower efficiency (water utilization factor)	Percent					99.9
Increase in Hydropower Installed capacity	Increase in Hydropower installed capacity in MW	Number					2326
Jobs creation in Hydropower construction	Number of jobs created in hydropower construction	Number					2653
Management of PDMS	Number of Substation users trained	Number					16
	PDMS Data uploaded into the system as per schedule	Status of Work					up-to-date data in the system
Preparation of Standards/Manuals/Guidelines/ToRs	ToR for Reconnaissance studies prepared	Status of Work					ToR submitted to Department
Publication of annual power system information	Annual power system data published	Date				03/31/2018	03/31/2019
Review of Sustainable Hydropower Development Policy 2008	Sustainable Hydropower Development Policy revised	Status of Work				Concept note on revised policy submitted to GNHC	Submitted to the Ministry
Submission of Hydropower Development Strategy report	Submitted Hydropower Development Strategy report to	Status of Work					Submitted to Cabinet

	the RGoB						
Total firm power generation enhanced	MW of total firm power generated	Number					410
Updation of Electricity file of Budget, Policy and Fiscal Framework Statement	Updated on quarterly basis	Number				4	4
Updation of Power System Master Plan 2003	Formulation of Power System Master Plan of Bhutan - 2040 undertaken	Status of Work				Two QPRs presented	Draft Final Report submitted

#### Section 4: Definition of Success Indicators

Success Indicator	Description	Data Collection Methodology	Data Collection Frequency	Data Source
Coordination for EJM Meeting and Management of the Secretariat	Request for EJM meeting sent and Secretariat Budget prepared on time.	Actual progress	Biannually	EJM Secretariat
Construction of Puna-I monitored	Any major issues, if arises will be apprised on need basis. The progress report will also be reported on need basis.	Actual progress	Biannually	PHPA
Construction of Puna-II monitored	Any major issues, if arises will be apprised on need basis. The progress report will also be reported on need basis.	Actual progress	Biannually	PHPA
Compliance of CA for Nikachhu monitored	Annual compliance report submitted to Department	Actual progress	Biannually	ThyE
Construction of Kholongchhu monitored	Any major issues, if arises will be apprised on need basis. The progress report will also be reported on need basis.	Actual progress	Biannually	KHEL
Compliance of CA for Dagachhu monitored	Annual compliance report submitted to Department	Actual progress	Biannually	DHPS
Implementation of Sankosh HEP	Final draft submitted to the Ministry	Actual progress	Biannually	DHPS
Number of BPSCC meeting held	one meeting held	Actual progress	Biannually	DHPS
Annual power system data published	power system data published by March 2019	Actual progress	Biannually	DHPS
Annual National Load Flow Studies using PSS/E software for transmission lines of 66kV and above undertaken	Simulation reports for two seasons (dry & wet) submitted	Actual progress	Biannually	DHPS

Study and assessment of the electricity demand forecasting (2019-2040) undertaken	Electricity demand forecasting report submitted to Department	Actual progress	Biannually	DHPS
PDMS Data uploaded into the system as per schedule	up-to-date data in the system	Actual progress	Biannually	DHPS/BPC/DGPC
Number of Substation users trained	16 users trained	Actual progress	Biannually	DHPS
Export tariff for Mangdechhu negotiated	Draft tariff protocol submitted to Ministry	Actual progress	Biannually	DHPS
Formulation of Power System Master Plan of Bhutan - 2040 undertaken	Draft Final Report submitted	Actual progress	Biannually	DHPS
Electricity Act, 2001 revised	Revised draft submitted to OAG for legal vetting	Actual progress	Biannually	DHPS
Sustainable Hydropower Development Policy revised	Revised Policy submitted to Ministry	Actual progress	Biannually	DHPS
Submitted Hydropower Development Strategy report to the RGoB	HDS report submitted to Cabinet	Actual progress	Biannually	DHPS
Participation in meetings/workshops of SAARC/BIMSTEC/SASEC/ERPC	Participated in 1) Three SAARC/BIMSTEC/SASEC related meetings 2) Three ERPC meetings.	Actual progress	Biannually	DHPS
Updated on quarterly basis	Electricity file updated quarterly	Actual progress	Biannually	DHPS
Preparation of Kuri-Gongri DPR undertaken	11th QPR submitted with 88% cumulative progress achievement of the planned DPR works in FY 2018-19.	Actual progress	Biannually	DHPS
DPR Study of 363 MW Khomachhu HEP initiated	Final ToR submitted to Department	Actual progress	Biannually	DHPS
Identification of one project for Pre-feasibility study	PFS project submitted to the Dept	Actual progress	Biannually	DHPS

ToR for Reconnaissance studies prepared	ToR submitted to Department	Actual progress	Biannually	DHPS
Participated in the testing and commissioning of Mangdechhu HEP	Compiled and submitted reports of Testing & Commissioning to the Department.	Actual progress	Biannually	DHPS
Number of jobs created in hydropower construction	Total number of Bhutanese employed during 2018-19. 2653 is projection of Bhutanese that would be employed in Puna-I, II, Mangdechhu, Nikachhu and Kholongchhu HEPs. The target is contingent to commencement of Kholongchhu HEP construction which is further subject to signing of Concession Agreement (CA).	Administrative record	Biannually	DHPS
Construction of 132 kV Kanglung – Phuntshothang line completed	12 monthly progress reports received	Actual progress	Biannually	DHPS
MW of total firm power generated	Increase in total firm power generated.	Administrative record	Biannually	DHPS
Increase in Hydropower installed capacity in MW	Increase in hydropower installed capacity in the country	Administrative record	Annually	DHPS
Improvement in hydropower efficiency (water utilization factor)	Water utilization factor maintained at 99.9	Administrative Record	Biannually	DGPC



### Section 5: Requirements from other Departments & Secretariat Divisions

Organisation Name	Relevant Success Indicator	Requirement from the Organisation	Justification for the Requirement	Requirement detail	Impact (If Not Met)
SECRETARIAT	Coordination for EJG Meeting and Management of the Secretariat	Meeting possible only upon concurrence of Gol	Bilateral forum	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Construction of Kholongchhu monitored	1. Resolved CBTE issues 2. KHEL to achieve the target	KHEL is responsible for implementation of the project	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Implementation of Sankosh HEP	Gol's consent on Agreement	The project is pursued for implementation as bilateral project	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Number of BPSCC meeting held	Contingent on the agenda to be tabled by the utilities and the Secretariat.	Cross sectoral forum	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	PDMS Data uploaded into the system as per schedule	BPC & DGPC to submit/upload the data.	The power data will be provided by BPC & DGPC	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Export tariff for Mangdechhu negotiated	RGoB and Gol's consensus on final tariff	Tariff need to be agreed upon by both RGoB and Gol	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Formulation of Power System Master Plan of Bhutan - 2040 undertaken	Target to be achieved unless in the event of any force majeure incidences	Huge amount of field activities involved. Therefore, completion of work within the schedule depends a lot	Not Available	Indicated progresses shall not be achieved

			on external factors as well.		
SECRETARIAT	Electricity Act, 2001 revised	Adoption of Hydropower Strategy report by the RGoB	The Hydropower strategy will set the direction of the hydropower sector	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Sustainable Hydropower Development Policy revised	Adoption of Hydropower Strategy report by the RGoB	The Hydropower strategy will set the direction of the hydropower sector	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Submitted Hydropower Development Strategy report to the RGoB	HDS report to be adopted by RGoB	RGoB's prerogative to adopt the HDS report	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Participation in meetings/workshops of SAARC/BIMSTEC/SASEC/ERPC	Dependent on conduct of seminars and meetings organized by SAARC Secretariat and BIMSTEC	SAARC Secretariat and BIMSTEC are organizers of the cited meetings and seminars	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Updated on quarterly basis	MoF to call for quarterly meetings	MoF is the leading agency for quarterly meeting	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Preparation of Kuri-Gongri DPR undertaken	Timely release of fund by Gol/GNHC	DPR carried out with Gol funding	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Participated in the testing and commissioning of Mangdechhu HEP	Mangdechhu project construction to be completed for commissioning	Commissioning works will commence only after completion of construction activities	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Number of jobs created in hydropower construction	CA for Kholongchhu to be signed and the award of main contract packages &	Construction of main packages will commence subject to CA signing	Not Available	Indicated progresses shall not be achieved

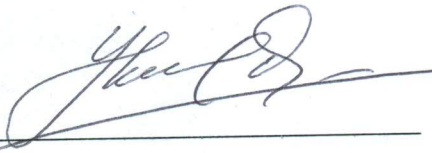
		construction of main packages to be commenced			
SECRETARIAT	Construction of 132 kV Kanglung – Phuntshothang line completed	BPC to submit the reports	BPC mandated to carry out the work	Not Available	Indicated progresses shall not be achieved
SECRETARIAT	Improvement in hydropower efficiency (water utilization factor)	DGPC to maintain water utilization factor at 99.9	DGPC is operating the power plants	Not Available	Indicated progresses shall not be achieved

**Whereas,**

I, the Director, Department of Hydropower and Power Systems (DHPS), commit to the Secretary, Ministry of Economic Affairs to deliver the results described in this annual performance agreement.

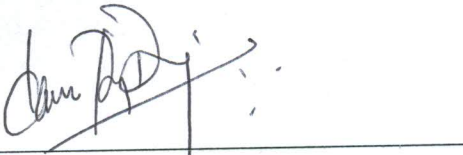
I, the Secretary, commit to the Director, DHPS on behalf of the Ministry and Government, to provide the necessary fund, resources and support as relevant, for delivery of the results described in this annual performance agreement.

**SIGNED:**

  
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Date 27 / 02 / 2019

**Secretary, MoEA**

  
\_\_\_\_\_

Date 27 / 2 / 2019

**Director, DHPS, MoEA**

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