



Casper Validator Node

ESG ROC (Report On Compliance)

Last Updated: November 18, 2021

Executive Summary

The consultants have performed an ESG ROC (Report on Compliance) examination in 2021 on behalf of the ETA (Emerging Technology Association) for its 10/31/2021 Node Validators (“Entity”) with its Casper Node Staking Framework System (the ‘Services’) in accordance with the the GRI Standards¹ as best practice for reporting environmental and social impacts.

The reporting is based on the Standards and best practices which provides information about the organization’s positive or negative contributions to ESG and sustainable development. In preparation for adoption by other entities involving staking operations, this readiness assessment review was performed to review the controls in advance of the examination in order to achieve multiple objectives, including:

1. The entity management can address the findings identified during the ROC
2. The ROC testing procedures examination, the deliverable of a ROC readiness assessment report is a document intended for the use of internal management for the entities involved in the staking operations.
3. Control weaknesses identified during the ROC readiness assessment are not provided to customers or other third parties.
4. The deliverable of the ROC readiness assessment contains a report that mimics that of an ESG Compliance audit.
5. The existence of this report will allow the consultants to gain efficiencies during the ROC testing procedures for the entities involved in such operations.

Please note that as a part of this readiness assessment, inquiries and testing were performed, and controls were identified and assessed.

The high level potential control gaps noted during this review are mentioned below. Additionally, specific control gaps are noted in section 3 of this report. Management should consider implementing effective controls to mitigate these potential control gaps before undergoing any type of examination.

¹ "GRI - GRI Standards English Language". *Globalreporting.Org*, 2021, <https://www.globalreporting.org/how-to-use-the-gri-standards/gri-standards-english-language/>

Guidance Regarding Information Provided by the ESG Consultant

Data

Data, as defined by the entity, constitutes the following:

- Customer Information (e.g. Personally Identifiable Information (PII))
- Customer Usage Data (e.g. clicks, interaction, time on the platform, any other metadata)
- Account information
- Documents, balances, transactions, statements
- Technical Logs
- Customer Communications

Processes, Policies and Procedures

MyDPO's examination of the ESG activity controls of the Staking Node Framework was limited to the GRI standards and best practices, related criteria and control activities specified by the management of the entity and did not encompass all aspects of the entity's operations or operations at user entities.

OVERVIEW OF OPERATIONS

Description of Services Provided

The Node validator provides Staking services in the Casper Network for individuals and or entities. A feature of Proof-of-Stake protocols is that token holders can actively participate in the protocol through a mechanism known as staking. Persons that hold their private keys can choose to stake their tokens with any validator in the Casper network. Alternatively, it is possible to stake tokens via an exchange or custody provider as well (as described on the Casper Documentation via <https://docs.casperlabs.io/en/latest/node-operator/setup.html>).

Boundaries of the System

The scope of this report includes the Staking Platform Services System performed in the United States and the European Union facilities. This report does not include the cloud hosting services provided by Amazon Web Services (AWS) or any other provider at multiple facilities.

Components of the System

Infrastructure

Primary infrastructure used to provide Staking Services System includes the following:

Primary Infrastructure		
Hardware	Type	Purpose
Server	Containers/Servers	Hosts files and databases to support the Staking Node.
Firewalls	Firewall cloud or on-prem	Filters traffic into and out of the private network supporting the corporate services.
IDS/IPS	cloud or on-prem	Intrusion Prevention

Software

Primary software used to provide Staking Services System includes the following:

Primary Software		
Software	Operating System	Purpose
Casper Staking	EKS (Elastic Kubernetes Service) - Ubuntu	Staking Node Service

SERVICES CRITERIA FOR THE ESG CATEGORY

Environmental

Environmental criteria may include a company's energy use, waste, pollution, and resource conservation.

Social

Social criteria look at the company's business relationships and its impact on the community.

Governance

All aspects of the company's management and processes such as financial reporting, risk management, physical security, logical access, computer operations, change control, and data communication standards. All teams are expected to adhere to the entity policies and procedures that define how services should be delivered.

Subservice Organization Controls

The Staking Node services are designed with the assumption that certain controls will be implemented by subservice organizations. It is not feasible for all of the ESG and sustainability criteria related to the entity's services to be solely achieved by the control procedures. Accordingly, subservice organizations, in conjunction with the services, should establish their own internal controls or procedures to complement those of the Staking Node Operator.

Note: Energy usage and other resource compliance metrics can be tracked on a periodic basis by the operator with the hosting provider. Such as sustainability reports for AWS, Google and other cloud services which disclose such compliance in which the node validator can leverage such due diligence for their reporting. Keeping in mind that the environmental side is only one aspect of the ESG and sustainability controls needed for the community to show maturity in this aspect.

For more information please rely on the following reports as an example of commonly used hosting entities:

- AWS - <https://sustainability.aboutamazon.com/about/report-builder>
- Google - <https://sustainability.google/reports/>
- Microsoft - <https://www.microsoft.com/en-us/corporate-responsibility/sustainability/report>

This is to provide guidance on hosting entities, as such operations change where the node validator and related applications are hosted.

ESG CONTROL ACTIVITIES SPECIFIED BY THE ORGANIZATION

Ref	Area	Controls
G1	Governance	The company has an annual report / financial statements.
G2	Governance	All related transactions at the company carried out on an arm's length basis.
G3	Governance	The names of the Board of Directors (BOD), their roles and compensation disclosed transparently.
G4	Governance	Meeting minutes prepared and approved after board meetings.
G5	Governance	In case of a single person firm, the company incorporated effective Business Continuity Management Planning into its policies.
G6	Governance	The company have the following policies in place: <ul style="list-style-type: none"> · Code of conduct / Code of ethics · Anti-bribery Policy · Anti-corruption and anti-money laundering policy" · Policy towards business integrity · Policy on internal control · Whistle blower policy
G7	Governance	The company has adequate internal controls in place and these are properly documented and periodically reviewed.
G8	Governance	The company gets audited regularly.
E1	Environment	The legal registers are maintained to track records of compliance with all the applicable regulations at the company.
E2	Environment	The company generates waste water or other effluents and manages it in a responsible manner.
E3	Environment	If the waste generated is hazardous it is managed in a responsible manner.
E4	Environment	The company has a rain water harvesting system or uses water in a sustainable way
E5	Environment	If the company generates air and noise emissions, it has controls to mitigate damages.
E6	Environment	The company monitors its use of energy and / or natural resources.
E7	Environment	The company monitors and discloses greenhouse gas emissions.

E8	Environment	The company takes measures to reduce / offset greenhouse gas emissions.
E9	Environment	The company has an Environment Policy.
E10	Environment	There's a dedicated environmental or social management representative / team.
E11	Environment	There are ESG disclosures in the public domain and the company uses international guidelines / standards such as the GRI used in this report.
E12	Environment	The company has an environmental management plan in place.
S1	Social	<p>The company have a human resource policy and it cover the following aspects:</p> <ul style="list-style-type: none"> ·employee benefits and requirements ·retrenchment policy · commitment towards non-tolerance of child labour and forced labour ·discrimination of any kind, ·equal opportunities, ·non- discrimination ·provisions for employees transfer to remote locations ·collective bargaining
S2	Social	The HR Policy also covers the contract workforce.
S3	Social	The HR policies communicated to employees and contract workforce.
S4	Social	The company has a grievance redressal mechanism in place for the employees to make formal complaints.
S5	Social	There's an ESG audit conducted by the company.
S6	Social	The company is involved in compulsory land acquisition causing displacement of people or communities from private or public lands having negative impacts on livelihoods.
S7	Social	In the land acquisition process, if there's any local opposition faced by the company. The company shows proper management towards the community.
S8	Social	There's documented evidence of public consultations held with the affected communities.
S9	Social	The company has some community engagement and mitigation programs.
S10	Social	The company has an emergency plan in place for fire evacuation, medical emergency, floods, earthquake, hazardous chemicals etc.

S11	Social	There's a defined frequency to update emergency response plans.
S12	Social	Regular mock fire drills conducted for the identified emergency response plans to protect human lives.
S13	Social	The company has a health and safety policy for its employees in place.
S14	Social	The company has sufficient fire extinguishers and hydrant systems spread across the site.
S15	Social	The are internal or external inspections and compliance checks on health and safety conducted on a regular basis.

INDEPENDENT CONSULTANT'S ASSESSMENT

S.No.	Parameters	Rating obtained (0= unsatisfactory 1=satisfactory, 2= very good, 3 = excellent)	Independent Consultant Comments
Environment			
1	Register of Regulations	1	Some regulations need to be defined as Blockchain keeps evolving
2	Pollution Abatement and Testing	2	The node validator can look for environmentally friendly hosting services
3	Resource Efficiency	2	The node validator can look for environmentally friendly hosting services
4	Greenhouse Gases emissions reduction	2	The node validator can look for environmentally friendly hosting services
5	Environment Policy and organization structure	3	As the policy is implemented the risk is mitigated
6	Certification of Environment Management System	2	Reliance on hosting entity and proper due diligence
7	Disclosure and Reporting	3	To be addressed in a separate reporting template
8	Environment Management Plan	2	To implement on the policy in order to mitigate the risk
	Total	17	

		score		
		Average score	2.125	
SOCIAL				
1	Social Policy		3	As the policy is implemented the risk is mitigated
2	Grievance Redressal Mechanism		2	Proper legal consulting
3	Monitoring/ Audits		3	To include ESG on audit plan
4	Minimize impacts and provide fair compensation and livelihood restoration		3	Proper legal consulting
5	Emergency Plans		1	To include in incident response plans
6	Health and Safety Policy and training		1	To include in incident response plans
		Total score	13	
		Average score	2.166666667	
GOVERNANCE				
1	Promoting a fair and transparent way of doing business		3	Per Node Validator Compliance framework
2	Ensure good governance practices at the Company		3	Per Node Validator Compliance framework
3	Ensure adequate internal checks for managing risks		3	Per Node Validator Compliance framework
		Total score	9	
		Average score	3	

Total ESG score	39
Average score per Criteria	2.430555556

Opportunities				
Potential Opportunities	Measures Recommended			
Proper policies in place	Proper legal consulting to establish policies and best practices.			
Increase environmental friendliness	The node validator can look for environmentally friendly hosting services.			

INDEPENDENT CONSULTANT'S OPINION

Under the current documentation available for Node Validators to run their operations they would be ranging around 39-40 points on an ESG Score. This brings the Node Validators to the Second Quartile of the expected ESG score by best practices.

Range	Description	ESG Score
0 to 25	First Quartile	Poor
25 to 50	Second Quartile	Satisfactory
50 to 75	Third Quartile	Good
75 to 100	Fourth Quartile	Excellent

Based on the common practices of the community it is recommended to establish proper policies and procedures which should be documented for supporting the functioning of controls and processes and made available to other employees and contractors. Also implementing governance and proper risk management (financial reporting, information security practices, vendor management with due diligence and due care, etc.). To increase the environmental friendliness of the operation it is suggested that the node validator when procuring hosting services should add to their selection criteria the ESG practices and energy usage of such providers.