Casper Validator Node

ESG Guidelines

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Introduction

All community members whether they are individuals, government bodies or private entities have focused their sight on cryptocurrencies either positively or negatively on the impact on the communities and our environment. Environmental, Social and Governance (ESG) criteria are standards for a company's operations which are done in a responsible way. ESG has been growing alongside cryptocurrencies and digital assets. This advisory discusses the risks and opportunities of ESG on node validators and other entities. Blockchain staking operations could facilitate secure decentralized transactions, reduce incidents of fraud, and increase transparency and efficiency in network transactions with decentralization. This paper is a guideline for a crypto staking operator based on the GRI framework of ESG and its relevance to responsible investors.

Environmental concerns have arisen from the amount of energy expended in computing activities related to cryptocurrencies, such as those that rely on a proof of stake consensus model (such the Casper Network). The emissions from the usage of computing power to run these operations, which have been argued by various sources, have the potential to significantly contribute to the acceleration of global warming. Node validators can differentiate themselves in the community from their ESG due diligence and due care by emphasizing their use of sustainable energy sources in staking activities. The validators have a responsibility even if the hosting services are outsourced by running computing power over third party machines by creating an oversight capacity over the criteria that might not apply directly to such operators. This is outlined by the supplemental spreadsheet to this document over the ESG framework controls and recommendations.

Environmental

Climate Change

Node operators should focus on reducing their impact on climate change by using clean power sources and driving energy efficiency in their operations. The electricity at all of their facilities worldwide, including every of their office, store, and data centre, should come from 100 per cent renewable energy—a standard they have to maintain, even as they continue to grow.

Wind Power

Node operators should continue to accept wind power interconnections, expanding their use of such energy in staking casper. They should also conduct wind condition surveys and assessments of promising wind sources while looking into ways of harmonizing facilities with the surroundings to develop their wind power facilities.

Hydroelectric Power

While hosting companies and node operators will systematically survey and develop hydroelectric power stations based on-site economic and environmental considerations, they should develop maintenance flow power generation to discharge dam water to regulate river flows to preserve scenery and river environments.

Geothermal Power

Some hosting companies are blessed with excellent geothermal resources. The combined capacity of their geothermal power stations should account for about

40% of the staking output from this energy source. This facility should earn considerable recognition.

Renewable Energies

Massive amounts of distributed solar, wind power, and other renewable energy could eventually be interconnected with staking activities, and distribution lines. The issue is the supply instability of such sources. To reliably maintain high-quality electricity supplies in the years ahead, node operators are taking steps to minimize voltage and frequency fluctuations. We are also looking to construct a next-generation power system that would optimize operations from all power sources, including nuclear, thermal, and renewable energy. Casper node validators measure more, so they can do more. They should take responsibility for their entire carbon footprint. That includes the emissions beyond their direct control, like those from sourcing materials, making any products, and their customers using their devices. They can calculate their carbon footprint in five major areas: corporate facilities, product use, product transportation, and product end-of-life processing. They can use this information to tell themselves where to focus. They should prioritize the use of renewable energy, starting with their own facilities and their hosting provider.

Whether designing a product, an operating system, or a manufacturing process, node operators should consider the environmental impact—alongside cost, durability, form, and functionality. Because the cleanest energy is the energy you never use, they’re reducing energy use at facilities they operate as well as those where their suppliers make our products.

Water Management

Water itself is plentiful, only a little fraction is offered to people who would like it. The insufficiency of H2O continues to extend, a trend exacerbated by temperature change. Thus node validators ought to hold themselves in charge of the water they use, whether or not at their company offices, knowledge centres, distribution centres, and retail stores or at their suppliers' facilities round the globe. Water is critical to control company facilities, as well as staking Casper or cooling knowledge centres. At hosting facilities, node validators will use water for processes like cutting, cleaning, in operation hardware and cooling. Thus staking node validators ought to work to conserve it and be smarter concerning the water they use. Focus each on up water use in their facilities. Node operators ought to interact with communities wherever they operate and manufacture products to form positive shared water resources square measure protected and accessible.

Zero Waste

Staking node validators ought to work to apply, recycle, compost, or, once necessary, convert into energy all the waste created by their own facilities and in our provide chain. Reaching this goal needs collaboration among multiple groups, native governments, and speciality recyclers.

Smarter Chemistry

Materials build products quicker, tougher, and additional lovely. however they're not all created equal. That's why node operators ought to apply their best innovation to picking materials that square measure safe for the people that use their product and hardware, for the people that build and recycle them, and for our planet. higher thinking suggests higher chemistry. Node operators ought to lead the business in removing several harmful substances from their products like material used on computers and other equipment if they are using bare metal servers and

endpoints for management, and that they ought to attend nice lengths to ensure that what they dispose of stays out. A node operator's approach ought to begin with aggregation of comprehensive chemical composition data for the substances accustomed to build your product further because of the processed chemicals.

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.*

Social

Cryptocurrencies were principally designed to be decentralised naturally and facilitate transactions that prove troublesome with ancient currency or investments. The employment of blockchain to validate transactions like network validation, instead of hoping on government oversight, was secure to own revolutionary effects for variant individuals, several of whom were antecedently unable to access money or banking services. This is often noted by different activities of the community with a perception that cryptocurrency is a dodging mechanism for taxation and different regulatory regimes or a driver for criminal activity.

Governance

Cryptocurrency's explosion has a junction rectifier to a boom of corporations targeting the crypto house. As institutional players like banks, hedge funds and

different money establishments enter the competition, the governance of crypto corporations can begin to require center stage. Additionally, the requirement for extremely skillful technical employees for each blockchain and cryptocurrency can place extra focus at the tutorial level to make sure equal opportunities exist for those fascinated by developing the talents necessary to be a region of the crypto field.

Governance, and above all the transparency of a node validator governance framework, forms a key driver of chance or exposure. Over time, governance can organically improve as digital plus entities become additional thought and listed on public exchanges, as they're going to be forced to stick to formalized governance and speech act models, as would the others in public listed companies inside the advantages of this rising technology.

These guidelines serve as an ESG framework for the node validators, which can be supplemented with internal controls (as stated in the Framework Tool supplemental to this report) to maintain compliance and serve as a guide for the design and implementation of such controls. The controls and processes should be tested on a periodic basis and maintain such documentation to ensure the ongoing efforts of ESG and sustainability of the node validators, hence improving the compliance culture in the community.

Disclosure

This document provides a framework for the convenience of the community and does not constitute legal advice for an actual participant or entity. The information provided herein may not be applicable in all situations, or may not be exhaustive for some entities, and should not be acted upon without specific legal or audit advice based on your particular situations.

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References

Rosado, Raul. “The Growing Importance of ESG to Cryptocurrency.” *Medium*, Rosadotech, 9 Sept. 2021, https://medium.com/rosadotech/the-growing-importance-of-esg-to-cryptocurrency-87dbf2ede93e

“Incoming Changes for Corporate ESG Accountability in the European Union.” *Morgan Lewis – Global Law Firm*, https://www.morganlewis.com/pubs/2021/08/incoming-changes-for-corporate-esg-accountability-in-european-union

McCulloch, Paul. "NYC CYBERLAW GROUP RESPONSE TO: SEC Request for Comment on Climate Change Disclosures". Sec.Gov, 2021, https://www.sec.gov/comments/climate-disclosure/cll12-8914426-244678.pdf

"ESG Cockpit - GRI – Global Reporting Initiative". ESG Cockpit, 2021, https://esg-cockpit.com/en/gri-global-reporting-initiative-2/