Blockchain technology could raise investments for green-energy projects

Blockchain technology with a community-based framework could raise investments for green-energy projects. Economist Farhad Taghizadeh-Hesary of Waseda University, Tokyo, explains:

> The key to this novel approach is building trust among the participants. A community-based approach taps individual investors, not banks, to invest in the green projects. Banks typically are reluctant to lend to such projects, considering them too risky.
>
> Japan has successfully used this approach to raise financing for wind- and solar-power projects, where individual investors commit small amounts—about $100 to $5,000—via the Internet.

The advent of blockchain technology, which powers Bitcoin, is another innovation that may be used to finance local renewable-energy projects.

The technology, which basically acts as an electronic ledger, allows transactions to be carried out between parties without interference by third parties like banks. It creates trust as it assures investors that all recorded transactions are secure because the data are stored in multiple blocks and therefore difficult to manipulate.

Another way the combined approach can build trust is by ensuring that projects are evaluated by a third-party assessor, who then stores the findings in a project assessment database grounded on blockchain technology. The stored data cannot be changed.

The proposed financing scheme has several benefits.

First, it establishes a direct connection between the investor and the project owner. Investors can track money streams, ensuring that their money reaches the project. This creates transparency and trust, which is crucial as the investment has to compete with other investment products.

Second, minimizing the power of intermediators reduces service costs. Projects are assessed more transparently, which, in the long run, ensures higher quality across projects.

Third, investors can mitigate their risk and improve the project's productivity by consulting third-party assessors.

Fourth, smart contracts are executed if investors agree to the contract details. This ensures full implementation of the contract details without any possibility of changing them. This feature creates trust and security for both parties and enables direct investments between partners.

Fifth, project proponents determine contract conditions, ensuring that the community benefits.

Sixth, for the instrument to be functional, only the technical features of such technologies are essential and the use of Bitcoin or similar currencies are not required. The money streams can either be in digital or conventional currencies.

> **The goal is to bring investors from developed countries together with projects in developing countries. Ideally, the project owners would be local communities seeking local or foreign investors. Those investors would gain financially for a certain period. Then the projects—such as solar- or wind-power generators—would be fully owned by the community and contribute to the local economy.**

This episode is based on research done for the Asian Development Bank Institute by Economist Farhad Taghizadeh-Hesary of Waseda University in Tokyo; ADBI Dean Naoyuki Yoshino; and economics graduate student Tim Schlober, University of Bonn, Germany, and Keio University, Tokyo.

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