

CLAIMS:

1. A system, comprising:
 - a memory configured to store a system provider device; and
 - one or more processors coupled to the memory and configured to execute instructions that cause the system provider device to perform operations comprising:
 - receiving transaction information for a transaction that is configured to provide for a transfer of a digital asset between a payer device and a payee device via a distributed public ledger;
 - accessing resource information associated with energy information expanded by each mining device of a plurality of mining devices for mining a block on the distributed public ledger;
 - selecting, using the resource information and predetermined energy information, a subset of the plurality of mining devices for processing the transaction; and
 - broadcasting, via a network to the subset of the plurality of mining devices the transaction information for the transaction to cause one of the subset of the plurality of mining devices to include the transaction in the block on the distributed public ledger.
2. The system of claim 1, wherein the operations further comprise:
 - receiving, at the system provider device, the resource information from the plurality of mining devices over multiple time periods; and
 - storing the resource information and corresponding identifiers of the plurality of mining devices in a database, wherein the resource information is accessed after the system provider device receives the transaction.
3. The system of claim 1, wherein the resource information indicating the energy information expanded by the plurality of mining devices is stored in a secondary distributed ledger, wherein the secondary distributed ledger is a sidechain to the distributed public ledger.
4. The system of claim 1, wherein the energy information includes energy consumption of each mining device in the plurality of mining devices for mining the block on the distributed public ledger.

5. The system of claim 1, wherein the energy information includes energy cost associated with operating each mining device in the plurality of mining devices.
6. The system of claim 1, wherein the operations further comprise:
 - transmitting to the subset of the plurality of mining devices verification information, wherein the verification information verifies resource information associated with each miner in the subset of the plurality of mining devices.
7. The system of claim 1, wherein the operations further comprise:
 - receiving the resource information from each mining device in the plurality of mining devices;
 - generating scores for the plurality of mining devices corresponding to the energy information in the resource information, one score for each mining device; and
 - storing the scores for the plurality of mining devices in a database.
8. A method, comprising:
 - receiving, at a system provider device, transaction information for a transaction that is configured to provide for a transfer of a digital asset between a payer device and a payee device via a distributed public ledger;
 - accessing, from the system provider device, resource information associated with energy information expanded by each mining device of a plurality of mining devices for mining a block on the distributed public ledger;
 - identifying, at the system provider device, predetermined energy information based on the transaction;
 - selecting, using the resource information and the predetermined energy information, a subset of the plurality of mining devices for processing the transaction; and
 - broadcasting, via a network to the subset of the plurality of mining devices the transaction information for the transaction to cause one of the subset of the plurality of mining devices to include the transaction in the block on the distributed public ledger.
9. The method of claim 8, further comprising:

receiving, at the system provider device, the resource information from the plurality of mining devices, a portion of the resource information corresponding to each mining device; and

storing the resource information and corresponding identifiers of the plurality of mining devices in a database.

10. The method of claim 8, wherein the resource information indicating the energy information expanded by the plurality of mining devices is stored in a secondary distributed ledger, wherein the secondary distributed ledger is a sidechain to the distributed public ledger.

11. The method of claim 8, wherein the energy information includes energy consumption of each mining device in the plurality of mining devices for mining the block on the distributed public ledger.

12. The method of claim 8, wherein the energy information includes energy cost associated with operating each mining device in the plurality of mining devices.

13. The method of claim 8, further comprising:
transmitting, to the subset of the plurality of mining devices, verification information, wherein the verification information verifies resource information associated with each miner in the subset of the plurality of mining devices.

14. The method of claim 8, further comprising:
receiving, at the system provider device, the resource information from each mining device in the plurality of mining devices;
generating, by the system provider device, scores for the plurality of mining devices corresponding to the energy information in the resource information, one score for each mining device; and
storing the scores for the plurality of mining devices in a database.

15. The method of claim 8, wherein the system provider device is located on the payee device or the payer device involved in the transaction.

16. The method of claim 8, wherein the system provider device is communicatively coupled over the network to the payer device or the payee device associated with the transaction, and to the plurality of mining devices.

17. A non-transitory machine-readable medium having stored thereon machine-readable instructions executable to cause a machine to perform operations comprising:
receiving, at a system provider device, transaction information for a transaction that is configured to provide for a transfer of a digital asset between a payer device and a payee device via a distributed public ledger;
accessing resource information associated with energy information expanded by each mining device of a plurality of mining devices for mining a block on the distributed public ledger, wherein the resource information is accessible prior to the transaction being received at the system provider device;
selecting, using the resource information and predetermined energy information, a subset of the plurality of mining devices for processing the transaction; and
broadcasting, via a network to the subset of the plurality of mining devices the transaction information for the transaction to cause one of the subset of the plurality of mining devices to include the transaction in the block on the distributed public ledger.

18. The non-transitory machine-readable medium of claim 17, wherein the operations further comprise:

receiving, at the system provider device and prior to the transaction, the resource information from the plurality of mining devices;

storing the resource information and corresponding identifiers of the plurality of mining devices in a database for accessing the resource information after receiving the transaction;

receiving, at the system provider device, an updated resource information from the plurality of mining devices at predefined time periods; and

updating the resource information in the database with the updated resource information.

19. The non-transitory machine-readable medium of claim 17, wherein the energy information includes energy consumption of each mining device in the plurality of mining devices for mining the block on the distributed public ledger.

20. The non-transitory machine-readable medium of claim 17, wherein the energy information includes energy cost associated with operating each mining device in the plurality of mining devices.