Electricity Consumption/U.S. Cryptocurrency Mining Operations: U.S. Energy Information Administration Analysis

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The United States Energy Information Administration ("EIA") issued a February 1st analysis titled:

Tracking Electricity Consumption from U.S. Cryptocurrency Mining Operations ("Analysis")

The *Analysis* undertakes a review of the electricity demand associated with United States cryptocurrency mining operations.

Crypto-assets are denominated digital assets implemented using cryptographic techniques. Cryptocurrencies are obtained through the use of intensive computing. The proof of work of cryptocurrency mining (i.e., the methodology of mining and transaction validation) can require a significant amount of computer capacity at an individual facility to solve the arbitrary and complex mathematical problems that create additional currency.

Electricity is, of course, required to power these facilities.

The EIA *Analysis* states that cryptocurrency mining operations have grown rapidly over the last several years. Preliminary estimates are stated to indicate that annual electricity use from such mining probably represents from 0.6% to 2.3% of United States electricity consumption.

Challenges are cited in attempting to track cryptocurrency mining energy use which include:

- Difficulty of identifying cryptocurrency mining activity among millions of U.S. end-use customers
- Dynamic nature of the crypto market where mining assets can be moved rapidly to areas with lower electricity prices

EIA states that it plans to begin collecting data on a monthly basis from United States cryptocurrency miners from February through July of 2024.

The sections of the *Analysis* include:

- Interest in Cryptocurrency Mining
- Electricity Use and Cryptocurrency Mining
- Methods for Estimating Energy Use in Cryptocurrency Mining
- A Top-Down Approach to Determine Crypto-Mining Electricity Usage
- A Bottom-Up Approach to Determine Crypto-Mining Electricity Usage
- Next Steps

A copy of the *Analysis* can be found [here](#).