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#### Original:

https://www.btcc.com/en-US/academy/crypto-basics/how-to-avoid-high-ethereum-gas-fees

### **How to Avoid High Ethereum Gas Fees?**

Ethereum gas fees are once again approaching record highs, putting a strain on everybody's wallets.

With an average Ethereum gas fee now sitting at more than \$46 for ERC-20 transfers, Ethereum transactions are now more than 20X higher than most other popular blockchains.

As Ethereum becomes increasingly expensive to use, it is now essentially unusable for low value transactions in the majority of cases.

Fortunately, there are a number of ways to cut transaction fees down to a bare minimum, helping you get more out of your transfers. Such as transacting on layer-2s, or using competing low-fee blockchains like Solana, Terra and Avalanche, the methods of which we will explain detailedly below.

### Ways to Reduce Ethereum Gas Fees

### **Time Your Transactions**

Though it is true that Ethereum transaction fees are generally high all the time, the average cost of a transaction can vary considerably throughout the day or week.

Because of this, if your transaction isn't urgent, you will likely find that you can potentially cut your costs by more than 50% if you send in your transaction when there is less demand on the network.

EthereumPrice provides a useful tool to help you work out when the gas price is at its lowest. As you can see, the gas price tends to be a lot lower after midnight on the weekend and is generally at its lowest at around midday every day.

Consider holding off on your transaction until the gas price is relatively low, but bear in mind that there are often times of major congestion where even 100+ gwei is a fair price for gas.

#### **Use a Layer-2 Solution**

Ethereum's high gas prices have been a regularly recurring problem since 2017.

This has spawned a wide array of layer 2 solutions, which aim to offload some of its transaction volume to a separate network, before finalizing the results of these transactions on the Ethereum main chain.

These can vary considerably in their form and function, but many of the more popular solutions have been sufficiently battle-tested and can result in significant gas cost savings for users.

Polygon, Arbitrum and Optimism are currently the most popular universal layer-2 solutions for Ethereum. As per data from L2Fees, these can offer a potentially 90%+ reduction in fees when transferring tokens, or slightly less of a reduction when transferring ETH.

Many of the most popular DeFi protocols and DApps have deployed on one or more layer 2s, so we recommend checking to see if your favorite app is supported.

#### **Use Other L1 Blockchains**

One of the best performing sectors of 2021 was so-called "Ethereum killers," or competing Layer-1 blockchains that promises ultra-low transaction fees and fast throughput compared to Ethereum. The most popular blockchains, termed SolLunAvax, has exploded in popularity, and market cap — it grew from a combined market cap of around 681M at the start of 2021 to 94.5B now, a staggering 138X increase in over a year.

Average transactions on Solana cost around \$0.00025, while transferring on Avalanche costs even lesser — around \$0.00004 according to AVAX gas tracker. With their increasing popularity and users flocking to these low-cost blockchains, their respective ecosystem has also exploded in numbers. Users can check out popular Solana ecosystem apps like Serum and Raydium for DeFi applications. For Avalanche ecosystem apps, protocols like Trader Joe and Pangolin are popular among DeFi users. Terra's vibrant ecosystem are also highly popular among LUNA-tics, with Anchor Protocol and Mirror Protocol the most popular.

## Why Are Your Transaction Fees so Expensive?

One of the major reasons why transactions cost so much usually boils down to the following:

- You're trying to transfer tokens
- You're invoking a smart contract

Unfortunately, any transaction that involves executing a smart contract and/or sending ERC-20 or any of the variety of NFT token standards will cost significantly more than conducting a simple ETH transfer. This is due to the fact that smart contract executions are far more taxing on the network than moving ETH between accounts.

Contrary to popular belief, the size of the transfer (in ETH terms) has no impact on the cost of the transaction, only the amount of computational work required for the transaction has an impact. As a result, more taxing transactions simply cost more.

But there is a way to minimize costs even when performing resource-heavy transactions — by aggregating transactions with other people looking to complete similar tasks, or by optimizing its gas efficiency.

A large number of platforms have emerged in recent months to help users do exactly this. This includes DEX aggregators like 1inch and Matcha; yield aggregators like Yearn Finance and Zapper; and DSN aggregators like ColdStack.

These platforms often not only improve gas efficiency, but also the yields you get from your transaction — potentially boosting your overall returns considerably.