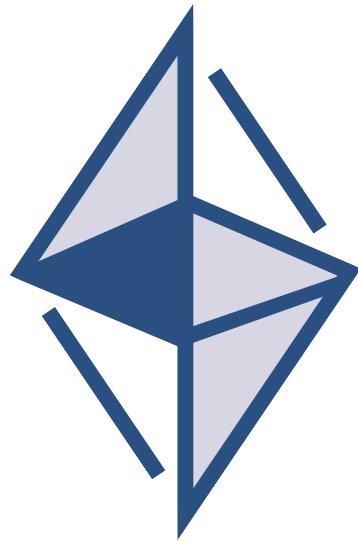


ethDenver  
2/16-18, 2018

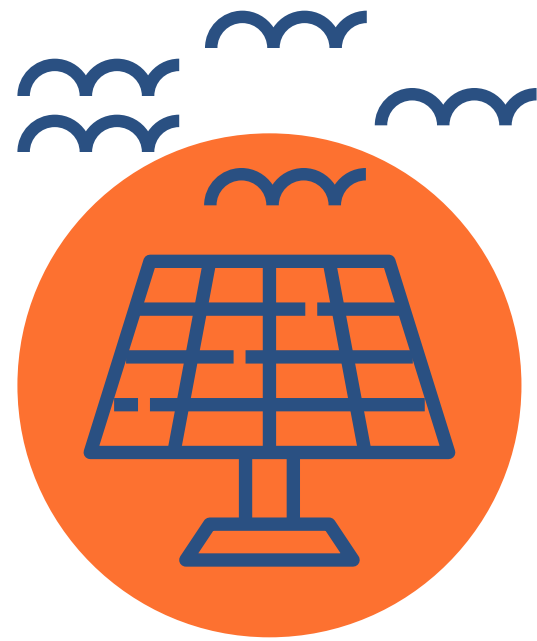


# Pothier

Smart Power Grid Control  
through Smart Contract

Soobin K  
Thomas K  
Qingyuan W

# Renewable Energy Problem



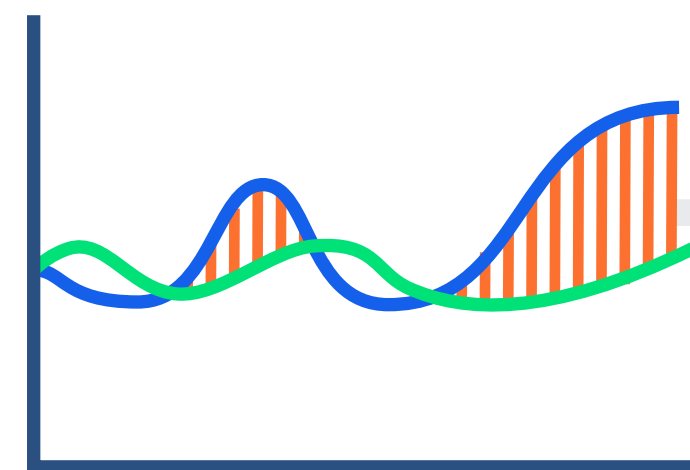
**Unpredictable  
Power Generation**



**Requires  
Ramping Generators  
as Backup**

# Power Grid Problem

Problem Created:  
Peak Power Demand  
Unpredictable Power Generation



Power Generation  $\neq$  Power Demand



Problem Noticed

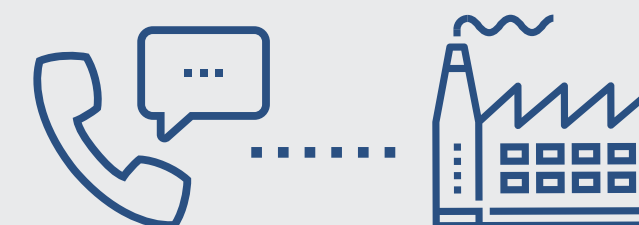
## Generate Power



Run Ramping Power Generator

Expensive infra & operation cost  
Pollution

## Adjust Power Demand

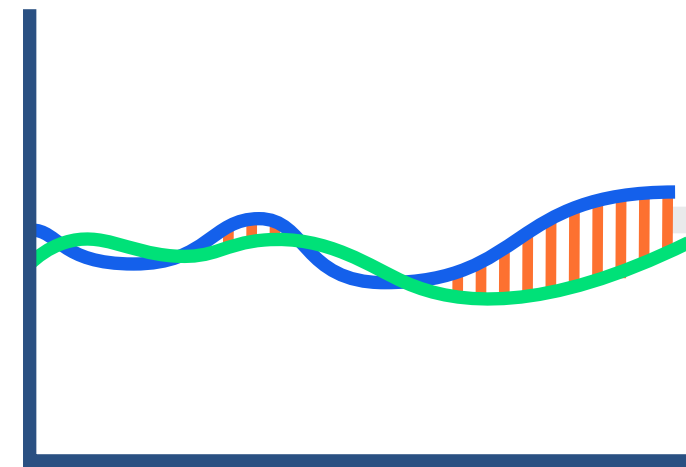


Manual Power Reduction Request

Slow respond  
Labor-intensive  
No feedback

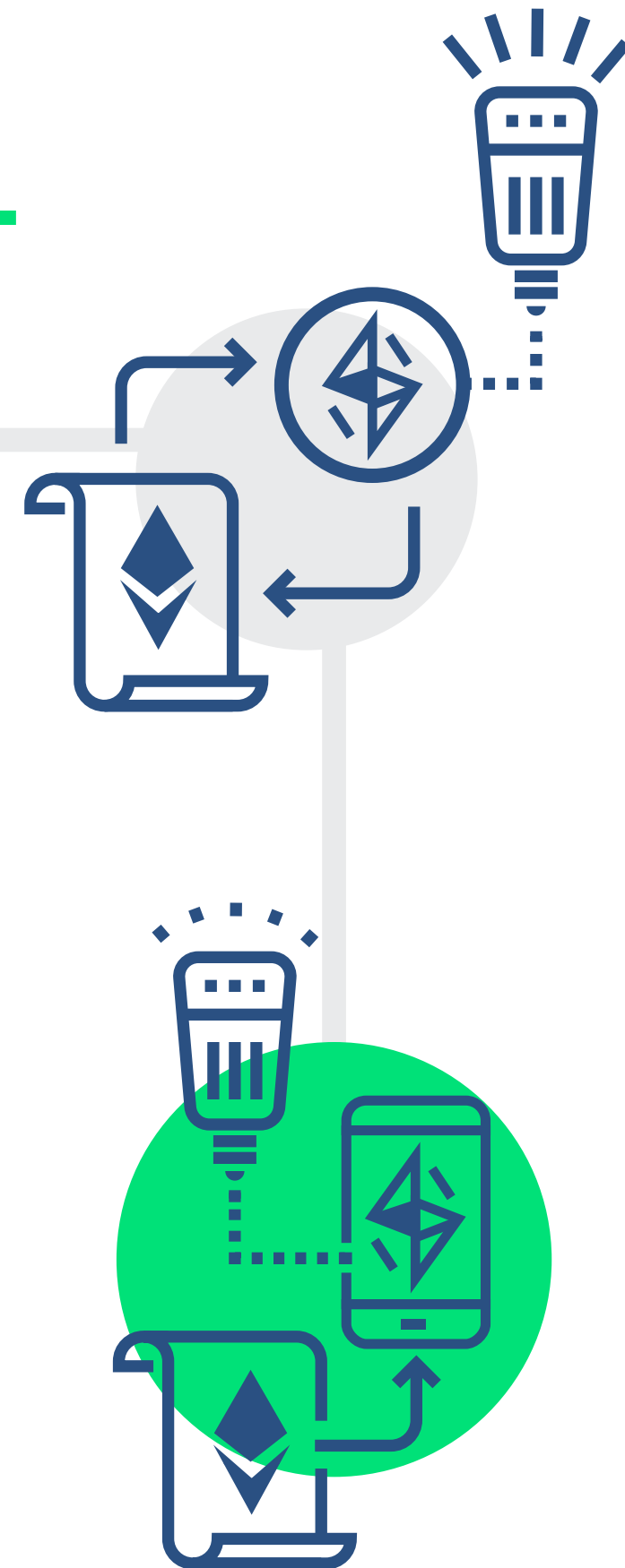
# Solution : Pother

**Problem Created:**  
Peak Power Demand  
Unpredictable Power Generation



Power Generation  $\neq$  Power Demand

**Request  
Power Adjustment  
through Smart Contract**



**Automated  
consumption  
Adjustment**

**Contract  
Execution**

Fast  
Automated  
Incentivized  
Cost-effective  
Verified

# Power Grid + EVM

## Why EVM/Smart Contract?



**Smooth / Defer  
Power Demand**



**Minimize  
Ramping Generator  
Operation**



**Fast Response  
& Complete  
Feedback Loop**

# Social Effect



**Encourage  
Renewable Energy  
Generation**



**Better  
Power Grid  
Management**



**Easy  
Power Saving  
with Incentives**