测试时间:2017-6-27

测试环境:remix.ethereum.org

1. 部署合约



2. setMeterOwner(要求多签名,次测试要求2个签名)



3. setIntialMeter

Events

```
SetInitialMeter [
"100",
"100",
"100"
```


4. presale (要求多签名)



```
Confirmation [
"0xca35b7d915458ef540ade6068dfe2f44e8fa733c",
"0x113e74b3708b6c109b1253748b00a05f6e3201e44bc61c684fc437c292cd53ef"
]

Confirmation [
"0x14723a09acff6d2a60dcdf7aa4aff308fddc160c",
"0x113e74b3708b6c109b1253748b00a05f6e3201e44bc61c684fc437c292cd53ef"
]

Presale [
"300",
"1",
"0x583031d1113ad414f02576bd6afabfb302140225"
]
```

powers

"0x583031d1113ad414f02576bd6afabfb302140225",0

Transaction cost: 23879 gas. (caveat)

Execution cost: 1071 gas.

Decoded:

1. uint256 peak: 300

2. uint256 pre_peak_value: 0

3. uint256 valley: 0

4. uint256 pre_valley_value: 0

5. uint256 flat: 0

6. uint256 pre flat value: 0



Events

```
Confirmation [
"0xca35b7d915458ef540ade6068dfe2f44e8fa733c",
"0x576abb7c4a3685f0dff7c2d20735bce3c3d5320cdf837b3e872d9ea93d267036"
]

Confirmation [
"0x14723a09acff6d2a60dcdf7aa4aff308fddc160c",
"0x576abb7c4a3685f0dff7c2d20735bce3c3d5320cdf837b3e872d9ea93d267036"
]

Presale [
"310",
"2",
"0x583031d1113ad414f02576bd6afabfb302140225"
]
```

powers

"0x583031d1113ad414f02576bd6afabfb302140225",0

Transaction cost: 23879 gas. (caveat)

Execution cost: 1071 gas.

Decoded:

1. uint256 peak: 300

2. uint256 pre peak value: 0

3. uint256 valley: 310

4. uint256 pre_valley_value: 0

5. uint256 flat: 0

6. uint256 pre flat value: 0

```
Events
Confirmation [
 "0x14723a09acff6d2a60dcdf7aa4aff308fddc160c",
 "0x29a2303dff31a234074e0f6b0f3346c1b3a452d76f2e831bca9bc15357a00f3c"
Confirmation [
 "0xca35b7d915458ef540ade6068dfe2f44e8fa733c",
 "0x29a2303dff31a234074e0f6b0f3346c1b3a452d76f2e831bca9bc15357a00f3c"
Presale [
 "320".
 "0x583031d1113ad414f02576bd6afabfb302140225"
                                 "0x583031d1113ad414f02576bd6afabfb302140225",0
            powers
 Transaction cost: 23879 gas. (caveat)
 Execution cost: 1071 gas.
 Decoded:
     1. uint256 peak: 300
     2. uint256 pre_peak_value: 0
     3. uint256 valley: 310
     4. uint256 pre_valley_value: 0
     5. uint256 flat: 320
     6. uint256 pre_flat_value: 0
                    320, 3, "0x583031d1113ad414f02576bd6afabfb302140225",1,0,"0xdd870fa1b7c4700f2bd7f44238821c26f7392148
 Transaction cost: 123395 gas.
 Execution cost: 98539 gas.
Decoded:
   1. bool: false
  * Launch debugger
 Transaction cost: 35303 gas
Execution cost: 45749 gas
Decoded:
```

1. bool: true

```
Events
Confirmation [
 "0xca35b7d915458ef540ade6068dfe2f44e8fa733c".
 "0x15a3c869984a82663b714b31f7191e09a26c8d49e313f7cf0697cf8520dc7d65"
1
Confirmation [
 "0x14723a09acff6d2a60dcdf7aa4aff308fddc160c",
 "0x15a3c869984a82663b714b31f7191e09a26c8d49e313f7cf0697cf8520dc7d65"
1
Presale [
 "320",
 "3",
 "0x583031d1113ad414f02576bd6afabfb302140225"
]
                                   "0x583031d1113ad414f02576bd6afabfb302140225",1
             powers
 Transaction cost: 23943 gas. (caveat)
 Execution cost: 1071 gas.
 Decoded:
     1. uint256 peak: 0
     2. uint256 pre_peak_value: 0
     3. uint256 valley: 0
     4. uint256 pre_valley_value: 0
     5. uint256 flat: 320
     6. uint256 pre_flat_value: 0
                      320, 3, "0x583031d1113ad414f02576bd6afabfb302140225",0,1,"0xdd870fa1b7c4700f2bd7f44238821c26f7392148
        presale
Transaction cost: 123395 gas.
Execution cost: 98539 gas.
Decoded:
   1. bool: false
  * Launch debugger
Exception during execution. (invalid opcode). Please debug the transaction for more information.
```

5. withdrawToken(多签名)

```
withdrawToken
                  250,2, "0x583031d1113ad414f02576bd6afabfb302140225",0,0,"0xdd870fa1b7c4700f2b
Transaction cost: 123289 gas.
Execution cost: 98561 gas.
Decoded:
   1. bool: false
  * Launch debugger
Transaction cost: 35119 gas.
Execution cost: 45509 gas.
Decoded:
   1. bool: true
Confirmation [
"0xca35b7d915458ef540ade6068dfe2f44e8fa733c",
"0xe5a3797cae73a099b264bda8753a80149246aa9d0359503e0482cbb90d4c1a88"
1
Confirmation [
"0x14723a09acff6d2a60dcdf7aa4aff308fddc160c",
"0xe5a3797cae73a099b264bda8753a80149246aa9d0359503e0482cbb90d4c1a88"
WithdrawToken [
"250",
"0x583031d1113ad414f02576bd6afabfb302140225"
                  300,3, "0x583031d1113ad414f02576bd6afabfb302140225",0,0,"0xdd870fa1b7c4700f2b
   withdrawToken
X
Transaction cost: 123353 gas.
Execution cost: 98561 gas.
Decoded:
   1. bool: false
  Launch debugger
Transaction cost: 35158 gas.
Execution cost: 45524 gas.
Decoded:
   1. bool: true
```

```
Confirmation [
"0xca35b7d915458ef540ade6068dfe2f44e8fa733c",
"0x8a8aa1802d39bd05e28c90049e4d07636e23ac30506f8406b8252543af513717"
]

Confirmation [
"0x14723a09acff6d2a60dcdf7aa4aff308fddc160c",
"0x8a8aa1802d39bd05e28c90049e4d07636e23ac30506f8406b8252543af513717"
]

WithdrawToken [
"300",
"0x583031d1113ad414f02576bd6afabfb302140225"
]
```

powers

"0x583031d1113ad414f02576bd6afabfb302140225",0

Transaction cost: 23879 gas. (caveat)

Execution cost: 1071 gas.

Decoded:

1. uint256 peak: 0

2. uint256 pre_peak_value: 0

3. uint256 valley: 310

4. uint256 pre_valley_value: 250

5. uint256 flat: 320

6. uint256 pre_flat_value: 300

6. submitPower

submitPower

420.1.0.0."0xdd870fa1b7c4700f2bd7f44238821c26f7392148"

Transaction cost: 32156 gas. Execution cost: 23772 gas.

Decoded:

1. bool: true

* Launch debugger

Events

```
SubmitPower [
"420",
"1"
```

initialMeter

"0x583031d1113ad414f02576bd6afabfb302140225"

Transaction cost: 23481 gas. (caveat)

Execution cost: 801 gas.

Decoded:

1. uint256 peak: 400

2. uint256 pre_peak_value: 0

3. uint256 valley: 100

4. uint256 pre_valley_value: 0

5. uint256 flat: 100

6. uint256 pre_flat_value: 0

powers

"0x583031d1113ad414f02576bd6afabfb302140225",0

Transaction cost: 23879 gas. (caveat)

Execution cost: 1071 gas.

Decoded:

1. uint256 peak: 0

2. uint256 pre peak value: 0

3. uint256 valley: 310

4. uint256 pre_valley_value: 0

5. uint256 flat: 320

6. uint256 pre_flat_value: 0

submitPower

420,3,0,0,"0xdd870fa1b7c4700f2bd7f44238821c26f7392148"

Transaction cost: 32299 gas. Execution cost: 38915 gas.

Decoded:

1. bool: true

Launch debugger

Events

```
SubmitPower [
"420",
"3"
```

powers

"0x583031d1113ad414f02576bd6afabfb302140225",0

Transaction cost: 23879 gas. (caveat)

Execution cost: 1071 gas.

Decoded:

1. uint256 peak: 0

2. uint256 pre_peak_value: 0

3. uint256 valley: 310

4. uint256 pre_valley_value: 250

5. uint256 flat: 0

6. uint256 pre flat value: 0

submitPower

410,2,0,0,"0xdd870fa1b7c4700f2bd7f44238821c26f7392148"

Transaction cost: 23627 gas. Execution cost: 23869 gas.

Decoded: 1. bool: true

★ Launch debugger

Events

```
SubmitPower [
"410",
"2"
```

powers

"0x583031d1113ad414f02576bd6afabfb302140225",0

Transaction cost: 23879 gas. (caveat)

Execution cost: 1071 gas.

Decoded:

1. uint256 peak: 0

2. uint256 pre_peak_value: 0

3. uint256 valley: 0

4. uint256 pre_valley_value: 0

5. uint256 flat: 0

6. uint256 pre flat value: 0

7. meterOpened

meterOpened

true

Transaction cost: 43537 gas. Execution cost: 22073 gas.

Decoded:

1. bool: true