

FIG. 1

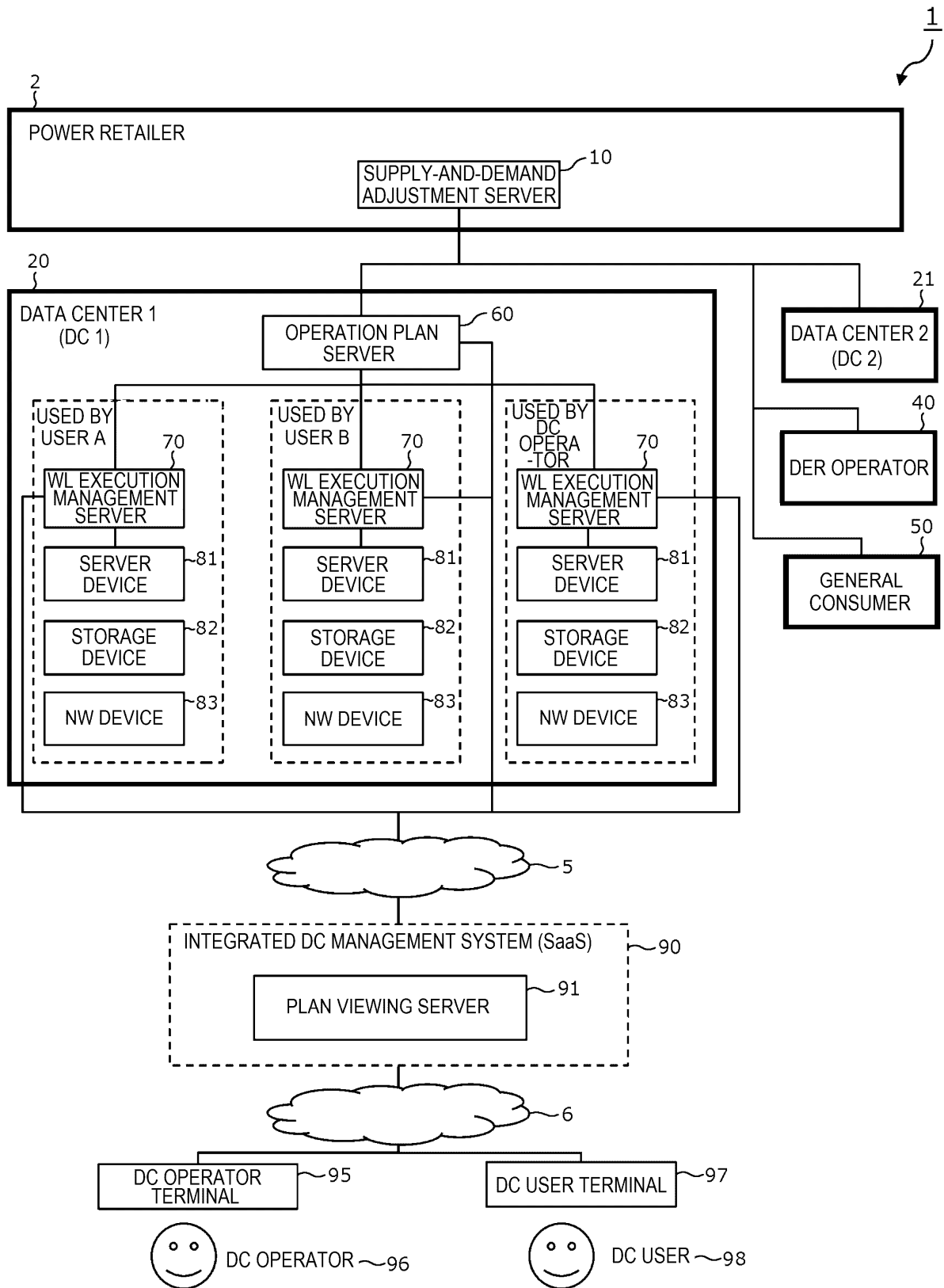
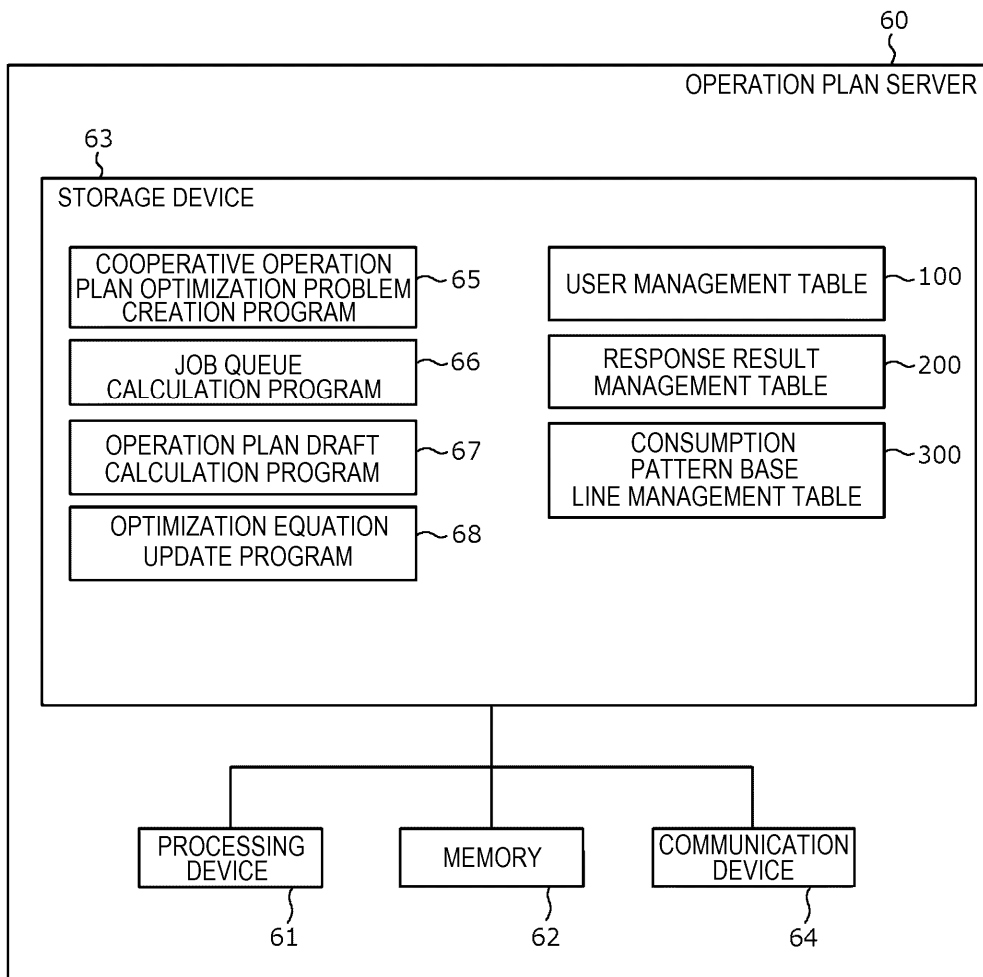


**FIG. 2****FIG. 3**

USER MANAGEMENT TABLE

100

| 101<br>USER NAME | 102<br>USER ID | 103<br>CAN RESPOND/<br>CANNOT RESPOND |
|------------------|----------------|---------------------------------------|
| A                | 1              | CAN                                   |
| B                | 2              | CANNOT                                |
| :                | :              | :                                     |

**FIG. 4**

RESPONSE RESULT MANAGEMENT TABLE

200

| 201<br>USER<br>ID | 202<br>RE-<br>SPONSE<br>ID | 203<br>COST | 204<br>REFLECTION<br>COMPLETION | 210<br>POWER<br>CONSUMPTION<br>AT 0:00 TO 0:30 | 220<br>POWER<br>CONSUMPTION<br>AT 0:00 TO 0:30 | 210<br>POWER<br>CONSUMPTION<br>AT 0:30 TO 1:30 | 220<br>POWER<br>CONSUMPTION<br>AT 0:00 TO 0:30 | ... |
|-------------------|----------------------------|-------------|---------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|-----|
| 1                 | 1                          | 500¥        | True                            | 2kWh                                           | 2kWh                                           | 3kWh                                           | 3kWh                                           | ... |
| 1                 | 2                          | 1000¥       | False                           | 2kWh                                           | 2kWh                                           | 3kWh                                           | 3kWh                                           | ... |
| 2                 | 1                          | 300¥        | True                            | 2kWh                                           | 2kWh                                           | 3kWh                                           | 3kWh                                           | ... |
| :                 | :                          | :           |                                 | :                                              | :                                              | :                                              | :                                              | :   |

**FIG. 5**

CONSUMPTION PATTERN BASE LINE MANAGEMENT TABLE

300

| 301<br>USER<br>ID | 310<br>POWER<br>CONSUMPTION<br>AT 0:00 TO 0:30 | 310<br>POWER<br>CONSUMPTION<br>AT 0:30 TO 1:00 | 310<br>POWER<br>CONSUMPTION<br>AT 1:00 TO 1:30 | 310<br>POWER<br>CONSUMPTION<br>AT 1:30 TO 2:00 | ... |
|-------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|-----|
| 1                 | 2kWh                                           | 3kWh                                           | 2kWh                                           | 3kWh                                           | ... |
| 2                 | 2kWh                                           | 3kWh                                           | 2kWh                                           | 3kWh                                           | ... |
| 3                 | 2kWh                                           | 3kWh                                           | 2kWh                                           | 3kWh                                           | ... |
| :                 | :                                              | :                                              | :                                              | :                                              | :   |

FIG. 6

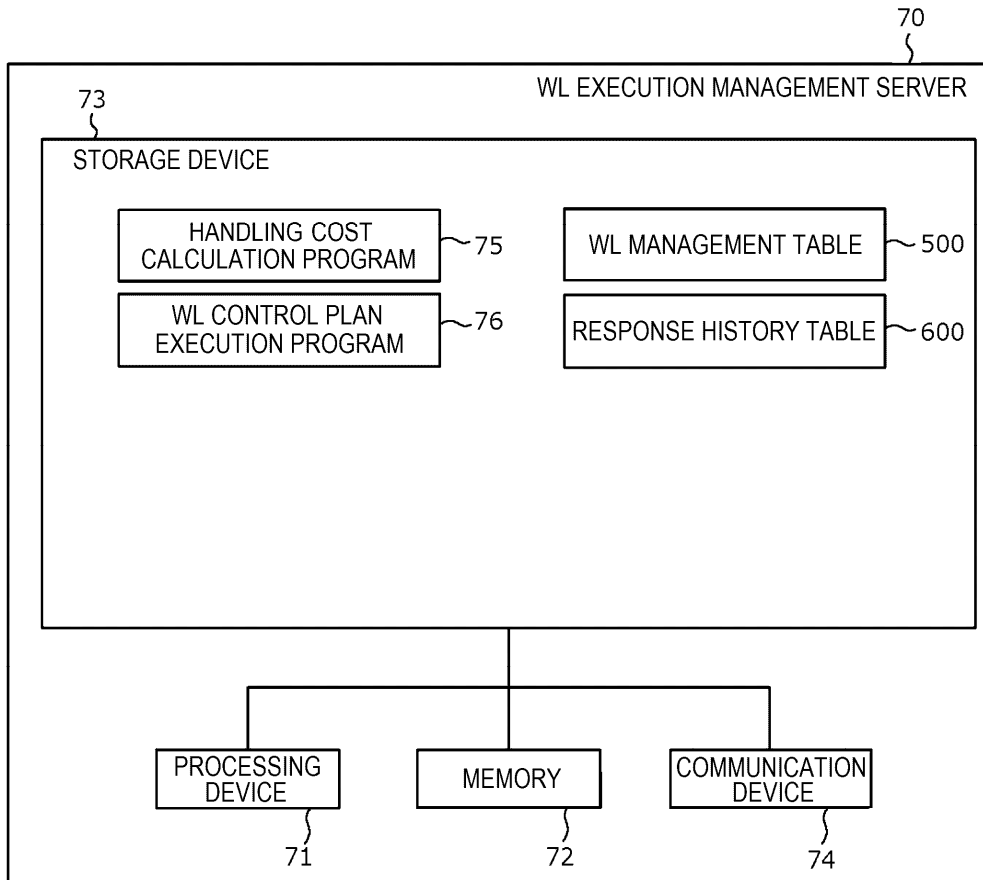


FIG. 7

WL MANAGEMENT TABLE 500 ↙

| 501<br>WORKLOAD ID | 502<br>POWER CONSUMPTION (ESTIMATED) | 503<br>EXECUTION DEADLINE   | 504<br>EXECUTION DELAY COST                   |
|--------------------|--------------------------------------|-----------------------------|-----------------------------------------------|
| 1                  | 0.1kWh                               | 12:00~16:00                 | ¥20 WITHIN DEADLINE,<br>10 ¥/h AFTER DEADLINE |
| 2                  | 0.3kWh                               | 13:00(IMMEDIATELY EXECUTED) | 100,000¥/h                                    |
| 3                  | 1.0kWh                               | 14:00~15:00                 | ¥0 WITHIN DEADLINE,<br>50 ¥/h AFTER DEADLINE  |
| :                  | :                                    | :                           | :                                             |

**FIG. 8**

RESPONSE HISTORY TABLE

600  
↙

| 601<br>RE-<br>SPONSE<br>ID | 602<br>COST | 610<br>POWER<br>CONSUMPTION<br>AT 0:00 TO 0:30 | 620<br>EXECUTION WL<br>AT 0:00 TO 0:30 | 610<br>POWER<br>CONSUMPTION<br>AT 0:30 TO 1:00 | 620<br>EXECUTION WL<br>AT 0:30 TO 1:00 | ... |
|----------------------------|-------------|------------------------------------------------|----------------------------------------|------------------------------------------------|----------------------------------------|-----|
| 1                          | 400¥        | 1kWh                                           | 1, 3                                   | 5kWh                                           | 2, 4, 6, 7,9                           | ... |
| 2                          | Inf ¥       | 0kWh                                           | N/A                                    | 0kWh                                           | N/A                                    | ... |
| 3                          | 800¥        | 1kWh                                           | 1, 3                                   | 1kWh                                           | 2, 6                                   | ... |
| :                          |             | :                                              | :                                      | :                                              | :                                      | :   |

**FIG. 9**

CONSUMPTION PATTERN

700  
↙

| 701<br>USER<br>ID | 710<br>POWER<br>CONSUMPTION<br>AT 0:00 TO 0:30 | 711<br>POWER<br>CONSUMPTION<br>AT 0:30 TO 1:00 | 712<br>POWER<br>CONSUMPTION<br>AT 1:00 TO 1:30 | 713<br>POWER<br>CONSUMPTION<br>AT 1:30 TO 2:00 | ... |
|-------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|-----|
| 1                 | 2kWh                                           | 3kWh                                           | 2kWh                                           | 3kWh                                           | ... |

# FIG. 10

FIG. 10: SAME VIEW OF CONSUMPTION PATTERN CHANGE  
DUE TO EARLY EXECUTION AND COST

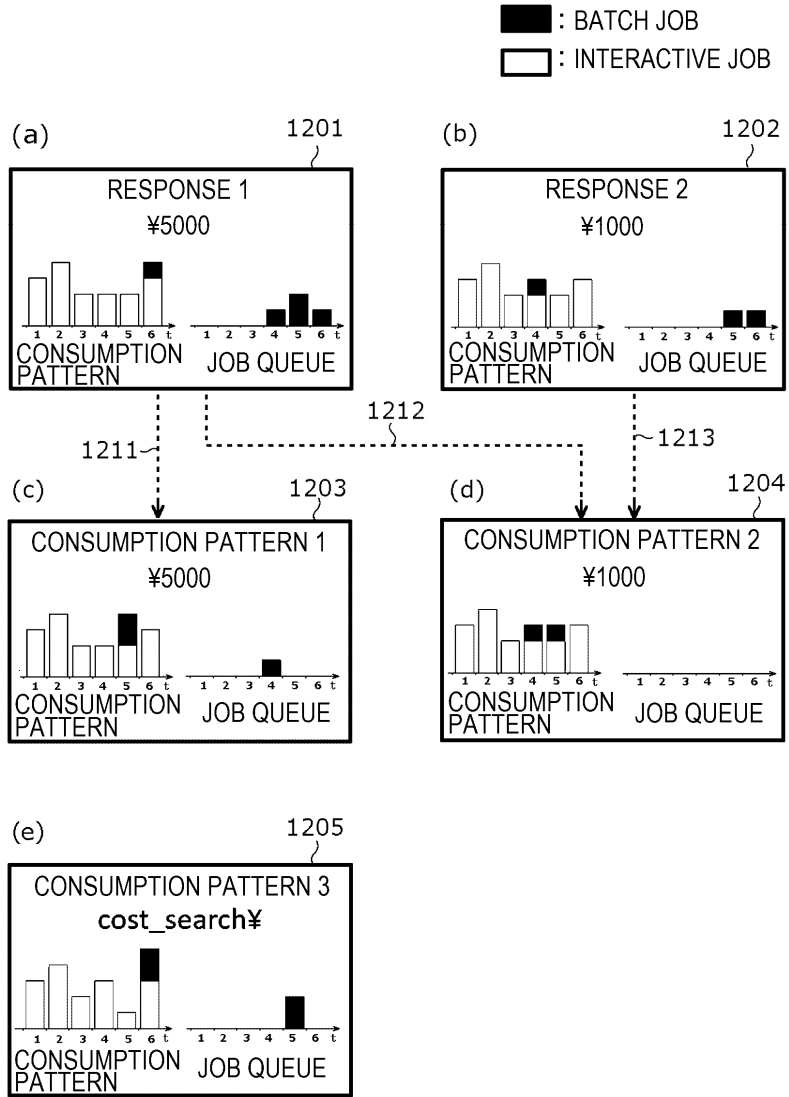


FIG. 11

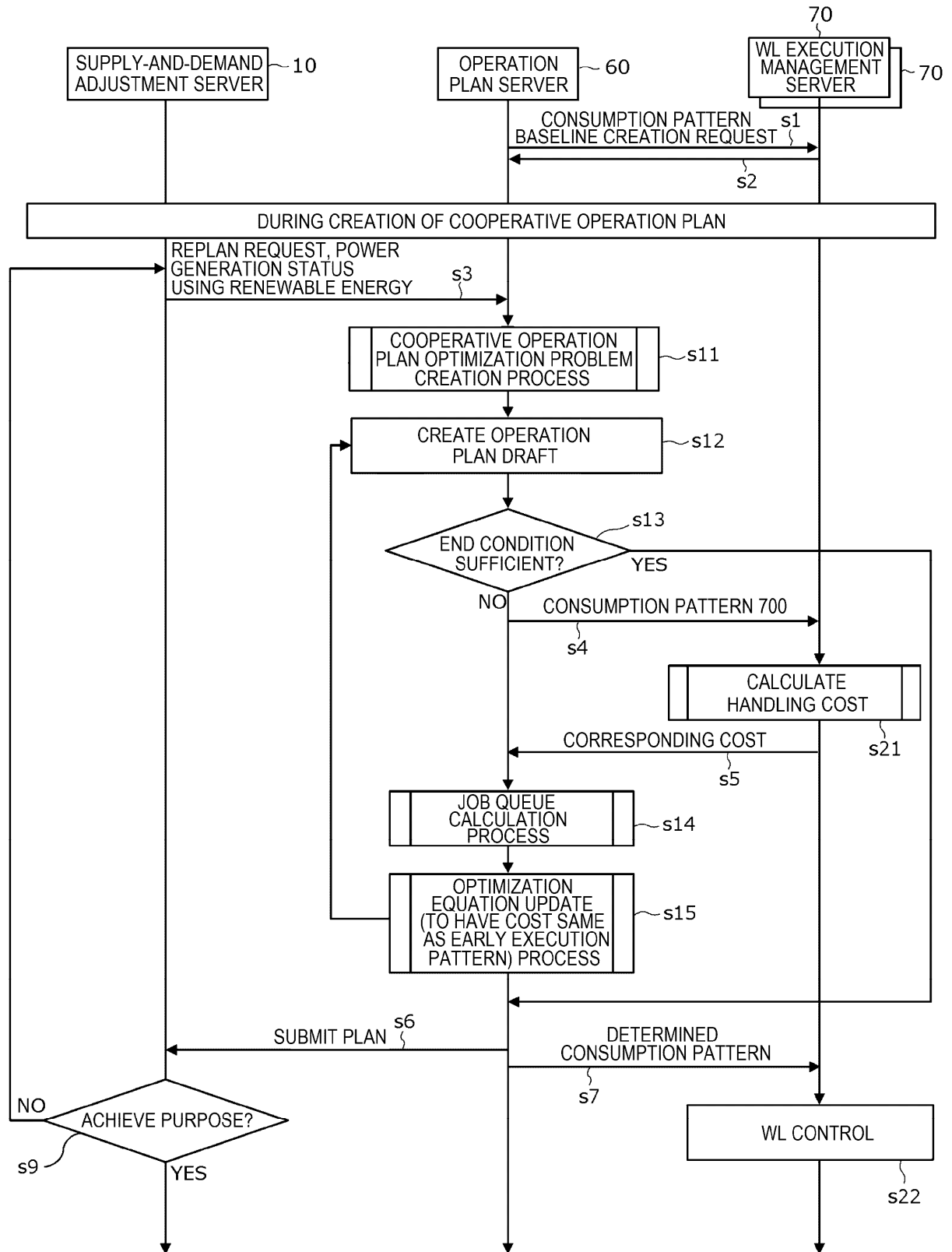


FIG. 12

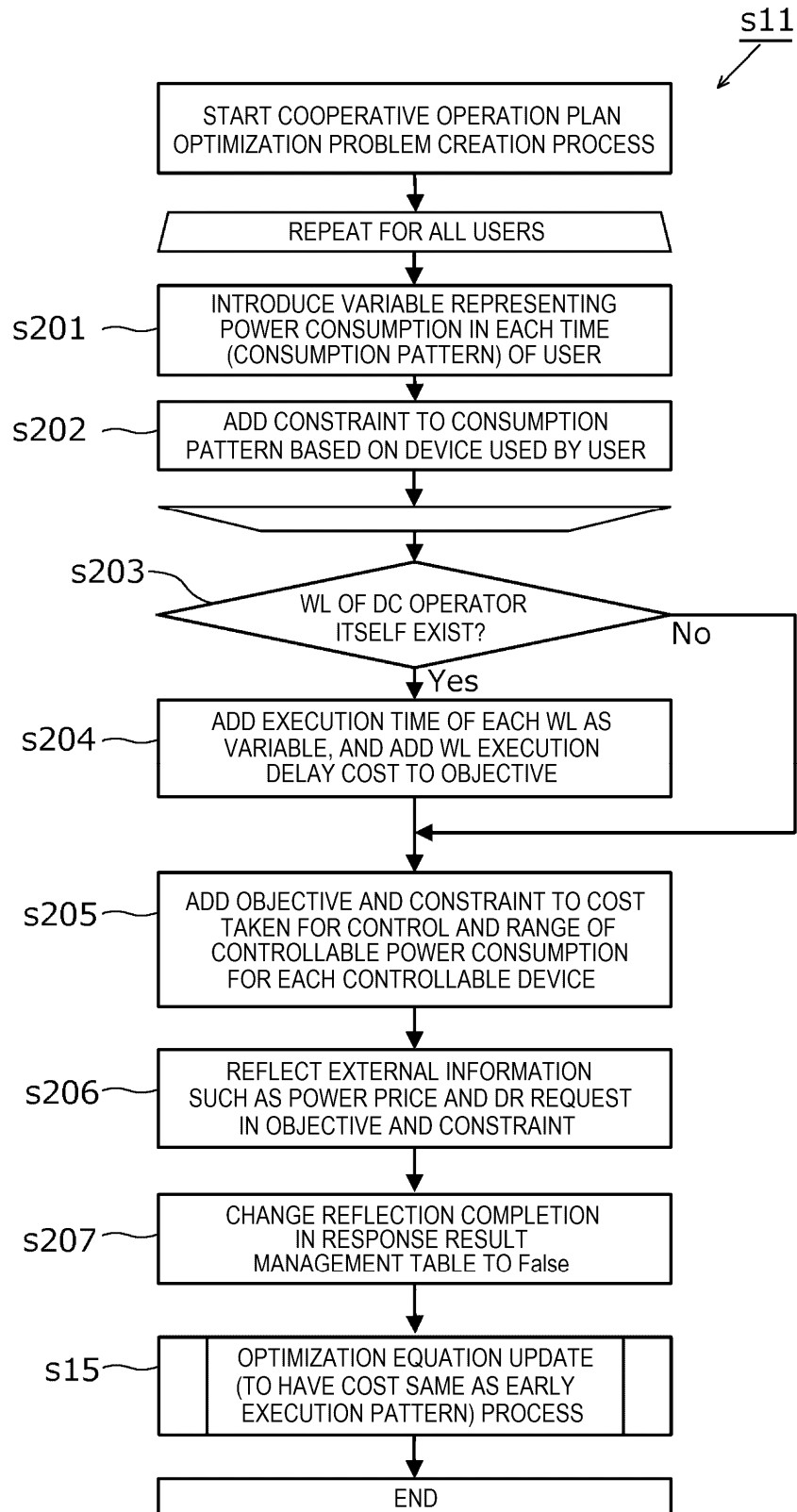


FIG. 13

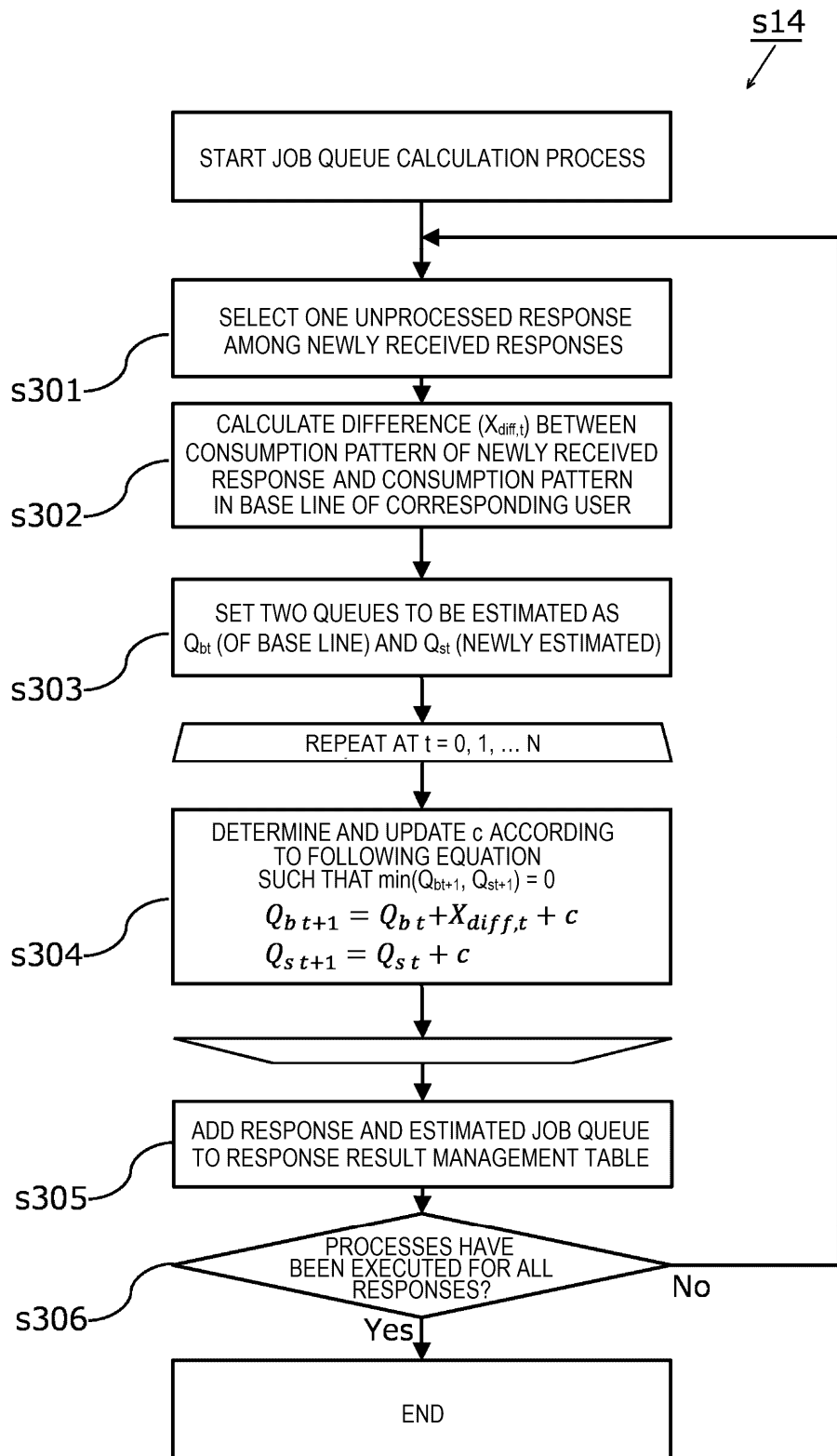


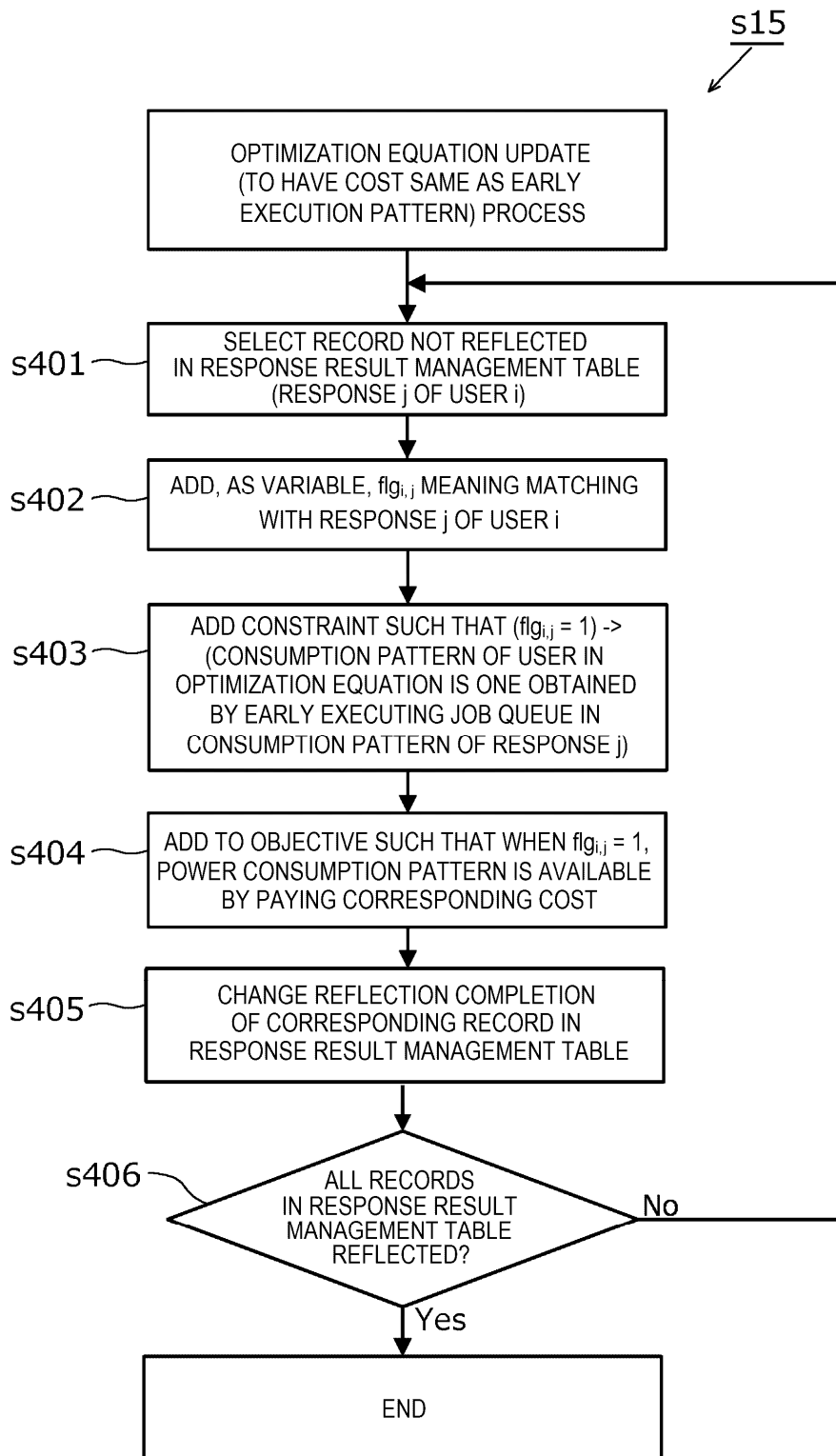
**FIG. 14**

FIG. 15

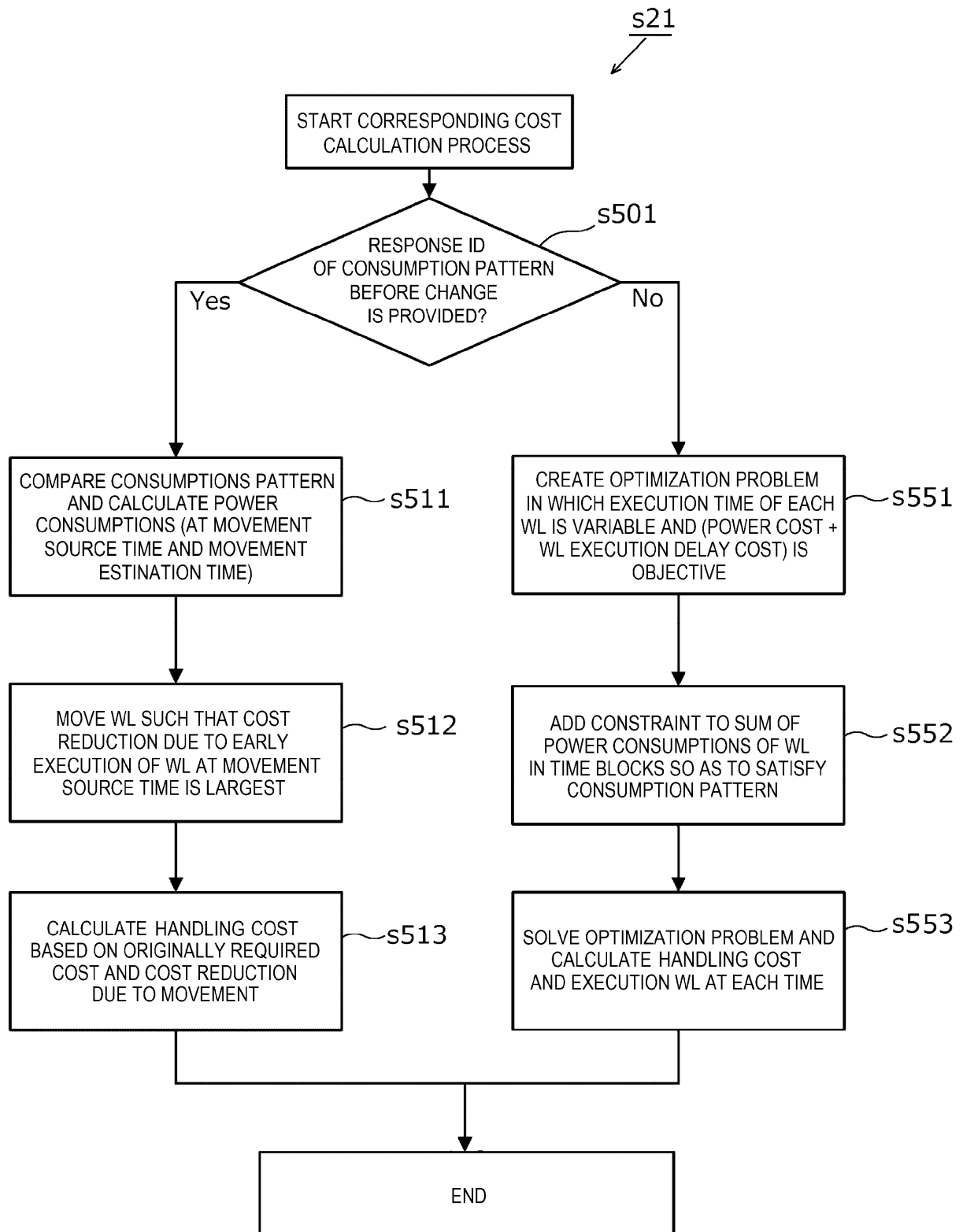


**FIG. 16**

SCREEN FOR DC OPERATOR

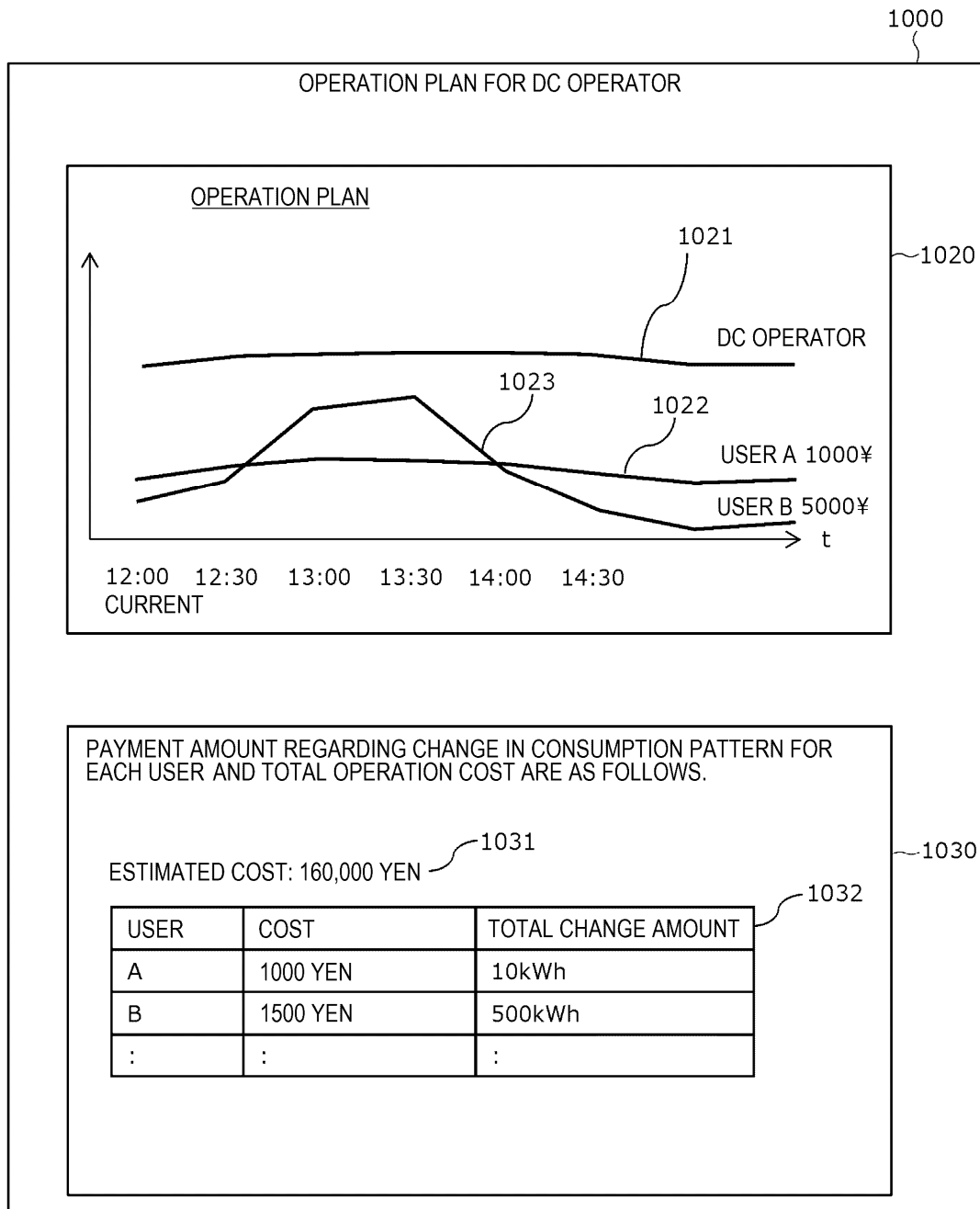


**FIG. 17**

SCREEN FOR DC USER

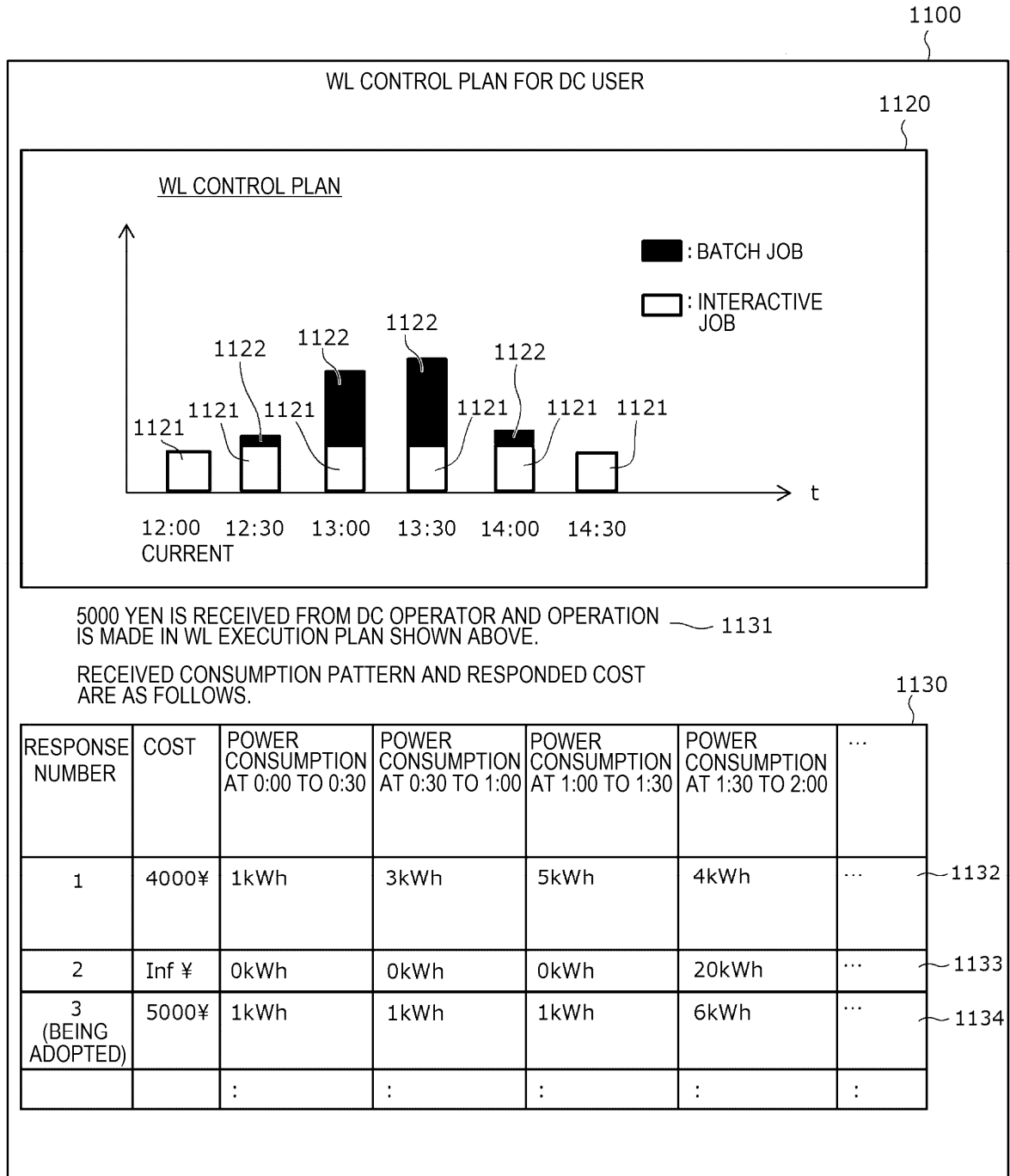


FIG. 18

