

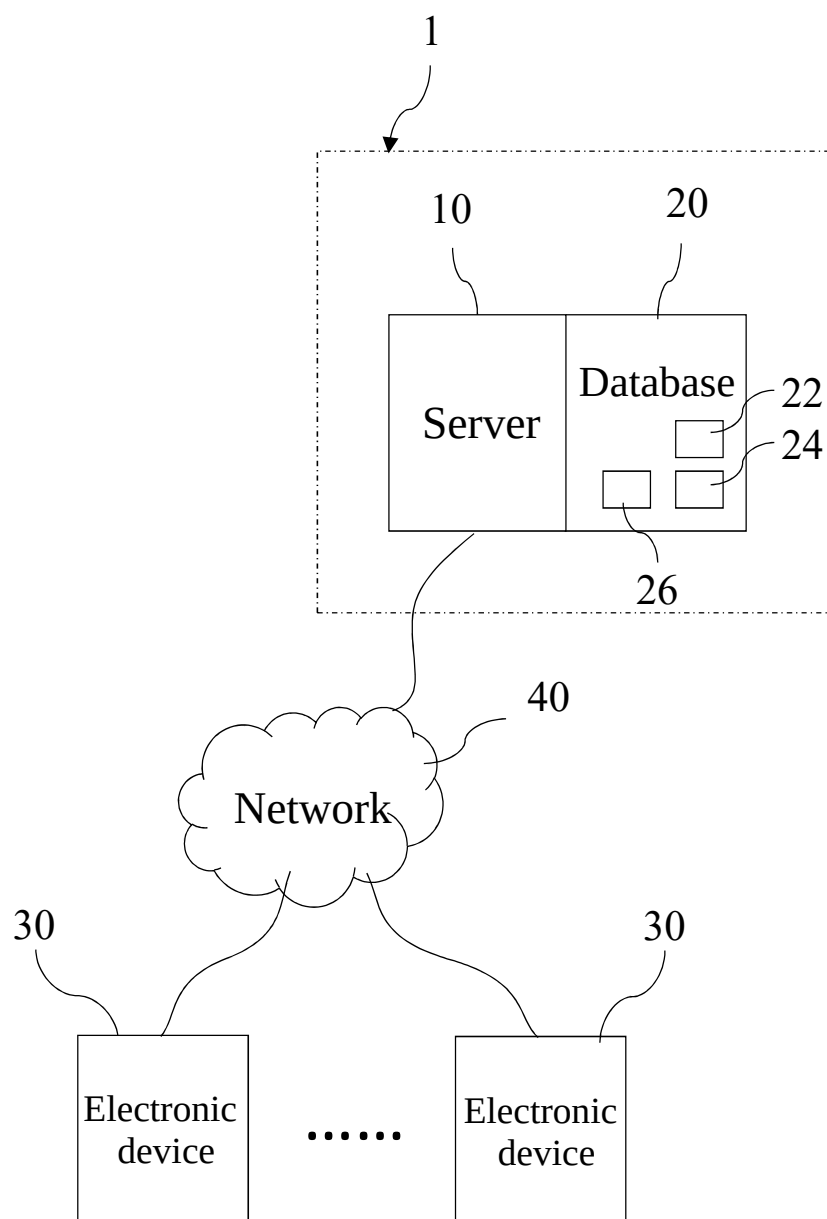


FIG. 1

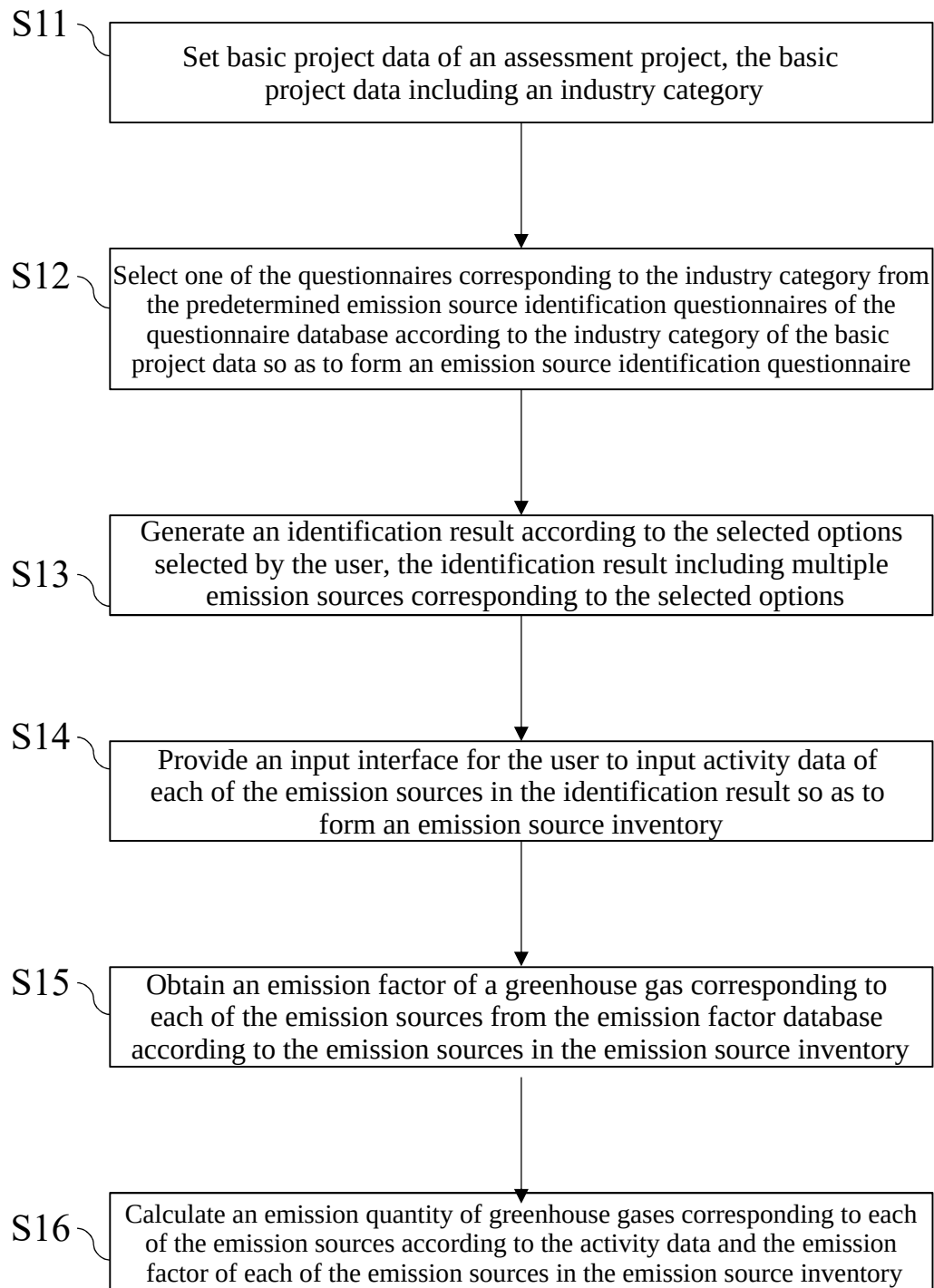


FIG. 2

52      50      60

Category 1 direct greenhouse gas emission

1.1 Stationary combustion emission sources

Yes (check)

50a Are there stationary combustion devices for "diesel"? ☒ Emergency generator

50a Are there stationary combustion devices for "natural gas (NG)"? ☐

50a Are there ...? ☐

1.2 Mobile combustion emission sources

50a Are there mobile combustion devices for "diesel"? ☒ Stacking machine

50a Are there mobile combustion devices for "motor gasoline"? ☒ Official vehicle

Are there ...? ☐

1.3 Industrial process emission sources

Is "acetylene" used for "cutting, maintenance, welding"? ☒ Welding

Is "welding rod" used for "cutting, maintenance, welding"? ☐

Are there ...? ☐

1.4 Anthropogenic fugitive emission sources

Is there "working of personnel", discharge of "water and fertilizer" and functioning of a "septic tank"? ☒ Work/man-day

Is there a quantity of replacement of "carbon dioxide fire extinguishers"? ☒ Carbon dioxide fire extinguisher

50a Are there ...? ☐

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Category 2 indirect greenhouse gas emission caused by energy

2.1 Indirect emission sources caused by energy

Yes (check)

50a Is there "purchased electricity"? ☒ Electricity consumption by the whole factory

50a Is there "purchased steam"? ☐

50a Is there "purchased heat"? ☐

54

FIG. 3

70



### Category 1

| Emission source                       | Self-defined emission source name | Emission type |
|---------------------------------------|-----------------------------------|---------------|
| Carbon dioxide                        | Carbon dioxide fire extinguisher  | Fugitive      |
| Motor gasoline                        | Official vehicle                  | Mobile        |
| Water and fertilizer and septic tanks | Work/man-day                      | Fugitive      |
| Acetylene                             | Welding                           | Process       |
| Diesel                                | Stacking machine                  | Mobile        |
| Diesel                                | Emergency generator               | Stationary    |

### Category 2

| Emission source       | Self-defined emission source name            | Emission type          |
|-----------------------|----------------------------------------------|------------------------|
| Purchased electricity | Electricity consumption by the whole factory | Outsourced electricity |

FIG. 4

82
80

| Category 1                            |                                   |               |               |                    |
|---------------------------------------|-----------------------------------|---------------|---------------|--------------------|
| Emission source                       | Self-defined emission source name | Emission type | Activity data | Activity data unit |
| Carbon dioxide                        | Carbon dioxide fire extinguisher  | Fugitive      | 0.001         | Metric ton         |
| Motor gasoline                        | Official vehicle                  | Mobile        | 3000          | Kiloliter          |
| Water and fertilizer and septic tanks | Work/man-day                      | Fugitive      | 20000         | Man-day            |
| Acetylene                             | Welding                           | Process       | 0.5           | Metric ton         |
| Diesel                                | Stacking machine                  | Mobile        | 10            | Metric ton         |
| Diesel                                | Emergency generator               | Stationary    | 2             | Metric ton         |

| Category 2            |                                          |                        |               |                    |
|-----------------------|------------------------------------------|------------------------|---------------|--------------------|
| Emission source       | Self-defined emission source name        | Emission type          | Activity data | Activity data unit |
| Purchased electricity | Electricity consumption by whole factory | Outsourced electricity | 10000         | Kilowatt           |

FIG. 5

### Category 1

| Emission source                       | Self-defined emission source name | Emission type | Activity data | Activity data unit | Greenhouse gas  | Emission factor | Factor unit            |
|---------------------------------------|-----------------------------------|---------------|---------------|--------------------|-----------------|-----------------|------------------------|
| Carbon dioxide                        | Carbon dioxide fire extinguisher  | Fugitive      | 0.001         | Metric ton         | CO <sub>2</sub> | 1.0000000000    | Metric tons/metric ton |
| Motor gasoline                        | Official vehicle                  | Mobile        | 3000          | Kiloliter          | CO <sub>2</sub> | 2.263132872     | Metric tons/kiloliter  |
| Water and fertilizer and septic tanks | Work/man-day                      | Fugitive      | 20000         | Man-day            | CH <sub>4</sub> | 0.000012750     | Metric tons/man-day    |
| Acetylene                             | Welding                           | Process       | 0.5           | Metric ton         | CO <sub>2</sub> | 3.384615385     | Metric tons/metric ton |
| Diesel                                | Stacking machine                  | Mobile        | 10            | Metric ton         | CO <sub>2</sub> | 2.606031792     | Metric tons/metric ton |
| Diesel                                | Emergency generator               | Stationary    | 2             | Metric ton         | CO <sub>2</sub> | 2.606031792     | Metric tons/metric ton |

### Category 2

| Emission source       | Self-defined emission source name        | Emission type          | Activity data | Activity data unit | Greenhouse gas  | Emission factor | Factor unit          |
|-----------------------|------------------------------------------|------------------------|---------------|--------------------|-----------------|-----------------|----------------------|
| Purchased electricity | Electricity consumption by whole factory | Outsourced electricity | 1000          | Kilowatt           | CO <sub>2</sub> | 0.50            | Metric tons/kilowatt |

FIG. 6

Category 1

| Emission source                    | Self-defined emission source name | Emission type | Activity data | Activity data unit | Greenhouse gas  | Emission factor | Factor unit            | Emission quantity | Unit       | GWP | CO <sub>2</sub> e | Unit       |
|------------------------------------|-----------------------------------|---------------|---------------|--------------------|-----------------|-----------------|------------------------|-------------------|------------|-----|-------------------|------------|
| Carbon dioxide                     | Carbon dioxide fire extinguisher  | Fugitive      | 0.001         | Metric ton         | CO <sub>2</sub> | 1.000000000     | Metric tons/metric ton | 0.001             | Metric ton | 1   | 0.001             | Metric ton |
| Motor gasoline                     | Official vehicle                  | Mobile        | 3000          | Kiloliter          | CO <sub>2</sub> | 2.263132872     | Metric tons/kiloliter  | 6789.398616       | Metric ton | 1   | 6789.399          | Metric ton |
| Water and fertilizer and seedlings | Work/man-day                      | Fugitive      | 20000         | Man-day            | CH <sub>4</sub> | 0.000012750     | Metric tons/man-day    | 0.255             | Metric ton | 25  | 6.375             | Metric ton |
| Acetylene                          | Welding                           | Process       | 0.5           | Metric ton         | CO <sub>2</sub> | 3.384615385     | Metric tons/metric ton | 1.692307693       | Metric ton | 1   | 1.692308          | Metric ton |
| Diesel                             | Stacking machine                  | Mobile        | 10            | Metric ton         | CO <sub>2</sub> | 2.606031792     | Metric tons/metric ton | 26.06031792       | Metric ton | 1   | 26.06032          | Metric ton |
| Diesel                             | Emergency generator               | Stationary    | 2             | Metric ton         | CO <sub>2</sub> | 2.606031792     | Metric tons/metric ton | 5.212063584       | Metric ton | 1   | 5.212064          | Metric ton |

Carbon dioxide emission equivalent of category 1 CO<sub>2</sub>e = 6828.739305 metric tons

Category 2

| Emission source       | Self-defined emission source name        | Emission type          | Activity data | Activity data unit | Greenhouse gas  | Emission factor | Factor unit          | Emission quantity | Unit       | GWP | CO <sub>2</sub> e | Unit       |
|-----------------------|------------------------------------------|------------------------|---------------|--------------------|-----------------|-----------------|----------------------|-------------------|------------|-----|-------------------|------------|
| Purchased electricity | Electricity consumption by whole factory | Outsourced electricity | 10000         | Kilowatt           | CO <sub>2</sub> | 0.509           | Metric tons/kilowatt | 5090              | Metric ton | 1   | 5090              | Metric ton |

Carbon dioxide emission equivalent of category 2 CO<sub>2</sub>e = 5090 metric tons

FIG. 7

90

## Project group , ABC Company

Total carbon dioxide emission equivalent CO<sub>2</sub>e = 56,000 metric tons

### Factory 1, ABC Company

Individual total carbon dioxide emission equivalent CO<sub>2</sub>e = 16,000 metric tons

### Factory 2, ABC Company

Individual total carbon dioxide emission equivalent CO<sub>2</sub>e = 12,000 metric tons

### Factory 3, ABC Company

Individual total carbon dioxide emission equivalent CO<sub>2</sub>e = 18,000 metric tons

### Factory 4, ABC Company

Individual total carbon dioxide emission equivalent CO<sub>2</sub>e = 10,000 metric tons

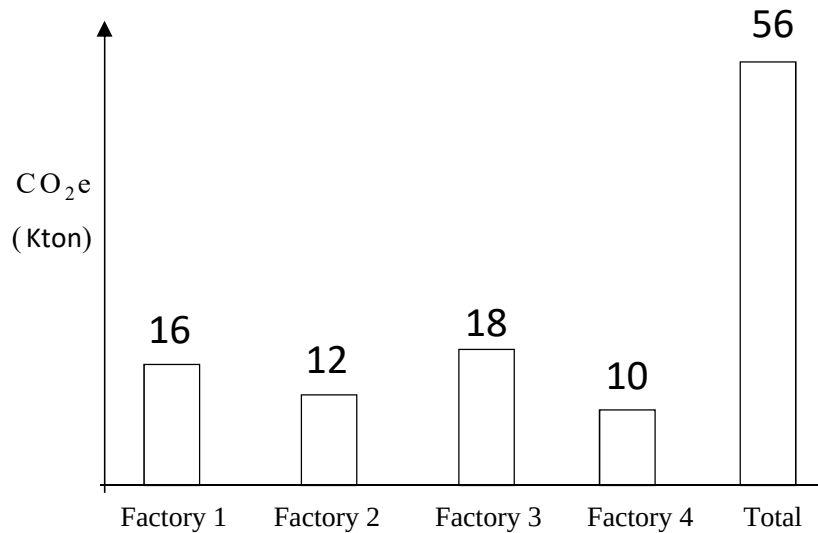


FIG. 8