

Plant Data Interfaces

Before invoking the following plant data interfaces, you need to invoke the plant list interface to obtain the plant ID.

[Real-Time Plant Data Interface](#)

[Hourly Plant Data Interface](#)

[Daily Plant Data Interface](#)

[Monthly Plant Data Interface](#)

[Yearly Plant Data Interface](#)

Real-Time Plant Data Interface

Interface Description

This interface is used to obtain real-time plant data by plant ID set. Data of a maximum of 100 plants can be queried at a time.

For details about the data list that can be queried using this interface, see [Interface for Real-time Plant Data](#).

Request URL

<https://{{Domain name of the management system}}/thirdData/getStationRealKpi>

Request Mode

HTTP method: POST

Access Restrictions

Traffic limiting is performed based on the number of plants managed by northbound API users. Number of northbound API calls per user every 5 minutes = Roundup (Number of plants/100)

Only one concurrent request is supported per minute.

If the access frequency exceeds the limit, the interface returns error code 407.

Example:

If a northbound API user manages 20 plants: Maximum number of northbound API calls per user every five minutes = Roundup (20/100) = 1

If a northbound API user manages 120 plants: Maximum number of northbound API calls per user every five minutes = Roundup (120/100) = 2

Request Parameters

Parameter	Description	Data Type	Mandatory/Optional
stationCodes	Plant ID list. Multiple plant IDs are separated by commas (,). Plant IDs are obtained from plantCode in Plant List Interface .	String	Mandatory

Response Packet

Parameter	Description	Data Type	Remarks
success	Request success or failure flag true: The request succeeded. false: The request failed.	Boolean	Request success or failure flag
failCode	Error code Value 0 indicates that the status is normal. For definitions of other error codes, see Error Code List .	Integer	-
params	Parameters	-	-

Parameter	Description		Data Type	Remarks
stationCodes		Plant ID list in the request parameter	String	-
currentTime		Current system time, in milliseconds	Long	-
message		Optional message	String	-
data	Parameters	Returned data. The data contains the real-time data object list of each plant.	List	-
	stationCode	Plant ID	String	-
	dataItemMap	Content of each data item, which is returned in the key-value format. For details about the data item list, see Interface for Real-time Plant Data .	Map	-

Example

Request example:

```
{
  "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5"
}
```

Response example:

Example 1: An error code is returned.

```
{
  "success":false,
  "data":null,
  "failCode":20009,
  "params":{
    "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
    "currentTime":1503046597854
  },
  "message":null
}
```

Example 2: Real-time plant data is returned.

```
{
  "success":true,
  "data":[
    {
      "dataItemMap":{
        "real_health_state":"3",
        "day_power":"10000",
        "total_power":"900.000",
        "day_income":"0.000",
        "month_power":"900.000",
        "total_income":"2088.000"
      },
      "stationCode": "BA4372D08E014822AB065017416F254C"
    },
    {
      "dataItemMap":{
        "real_health_state":"1",
        "day_power":"16770.000",
        "total_power":"35100.000",
        "day_income":"26832.000",
        "month_power":"35100.000",
        "total_income":"61152.000"
      },
      "stationCode": "5D02E8B40AD342159AC8D8A2BCD4FAB5"
    }
  ],
  "failCode":0,
}
```

```

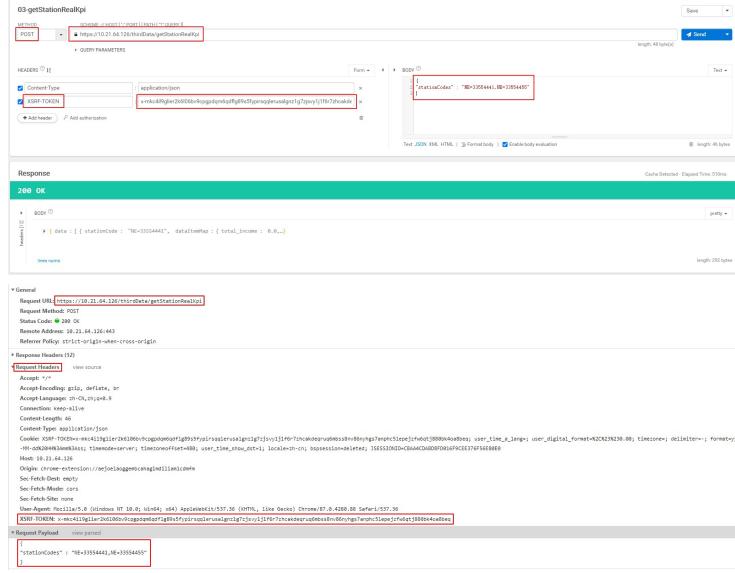
"params": {
    "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
    "currentTime": 1503046597854
},
"message": null
}

```

NOTE

Prerequisites for obtaining data: The user has the permission to access this interface.

Request example:



Hourly Plant Data Interface

Interface Description

This interface is used to obtain hourly plant data. Data of a maximum of 100 plants can be queried at a time.

The backend calculates the date of the collection time based on the request parameter **collectTime** (collection time in milliseconds) and the time zone where the plant is located. Then, you can query the hourly data of the plant by plant ID in the current day. If data is generated for n ($0 \leq n \leq 24$) hours of the day, n ($0 \leq n \leq 24$) results are returned.

For details about the data list that can be queried using this interface, see [Hourly Plant Data Interface](#).

Request URL

[https://\[Domain name of the management system\]/thirdData/getKpiStationHour](https://[Domain name of the management system]/thirdData/getKpiStationHour)

Request Mode

HTTP method: POST

Access Restrictions

Traffic limiting is performed based on the number of plants managed by northbound API users. Number of northbound API calls per user per day = Roundup (Number of plants/100) + 24

Only one concurrent request is supported per minute.

If the access frequency exceeds the limit, the interface returns error code 407.

Example:

If a user manages 20 plants, the maximum number of API calls per day = Roundup (20/100) + 24 = 1 + 24 = 25.

If a user manages 120 plants, the maximum number of API calls per day = Roundup (120/100) + 24 = 2 + 24 = 26.

Request Parameters

Parameter	Description	Data Type	Mandatory/Optional

Parameter	Description	Data Type	Mandatory/ Optional
stationCodes	Plant ID list. Multiple plant IDs are separated by commas (,). Plant IDs are obtained from plantCode in Plant List Interface .	String	Mandatory
collectTime	Collection time, in milliseconds	Long	Mandatory

Response Packet

Parameter	Description	Data Type	Remarks
success	Request success or failure flag true: The request succeeded. false: The request failed.	Boolean	Request success or failure flag
failCode	Error code Value 0 indicates that the status is normal. For definitions of other error codes, see Error Code List .	Integer	-
params	Parameters	-	-
	stationCodes	Plant ID list in the request parameter	String
	collectTime	Collection time in milliseconds in the request parameter	Long
	currentTime	Current system time, in milliseconds	Long
message	Optional message	String	-
data	Parameters	Returned data. The data contains the hourly data object list of each plant.	List
	stationCode	Plant ID	String
	collectTime	Collection time, in milliseconds	Long
	dataItemMap	Content of each data item, which is returned in the key-value format. For details about the data item list, see Hourly Plant Data Interface .	Map

Example

Request example:

```
{
  "stationCodes": "BA4372D08E014822AB065017416F254C, 5D02E8B40AD342159AC8D8A2BCD4FAB5",
  "collectTime": 1501862400000
}
```

Response example:

Example 1: An error code is returned.

```
{
  "success": false,
  "data": null,
  "failCode": 20009,
  "params": {
    "stationCodes": "BA4372D08E014822AB065017416F254C, 5D02E8B40AD342159AC8D8A2BCD4FAB5",
    "collectTime": 1501862400000,
    "currentTime": 1503046597854
  },
}
```

```
        "message":null
    }

Example 2: Hourly plant data is returned.

{
    "success":true,
    "data":[
        {
            "dataItemMap":{
                "radiation_intensity":null,
                "theory_power":null,
                "inverter_power":0,
                "ongrid_power":null,
                "power_profit":0
            },
            "stationCode":"5D02E8B40AD342159AC8D8A2BCD4FAB5",
            "collectTime":1501862400000
        },
        {
            "dataItemMap":{
                "radiation_intensity":null,
                "theory_power":null,
                "inverter_power":0,
                "ongrid_power":null,
                "power_profit":0
            },
            "stationCode":"5D02E8B40AD342159AC8D8A2BCD4FAB5",
            "collectTime":1501866000000
        },
        {
            "dataItemMap":{
                "radiation_intensity":null,
                "theory_power":null,
                "inverter_power":0,
                "ongrid_power":null,
                "power_profit":0
            },
            "stationCode":"BA4372D08E014822AB065017416F254C",
            "collectTime":1501873200000
        },
        {
            "dataItemMap":{
                "radiation_intensity":null,
                "theory_power":null,
                "inverter_power":0,
                "ongrid_power":null,
                "power_profit":0
            },
            "stationCode":"5D02E8B40AD342159AC8D8A2BCD4FAB5",
            "collectTime":1501876800000
        },
        {
            "dataItemMap":{
                "radiation_intensity":null,
                "theory_power":null,
                "inverter_power":0,
                "ongrid_power":null,
                "power_profit":0
            },
            "stationCode":"5D02E8B40AD342159AC8D8A2BCD4FAB5",
            "collectTime":1501880400000
        },
        {
            "dataItemMap":{
                "radiation_intensity":null,
                "theory_power":null,
                "inverter_power":0,
                "ongrid_power":null,
                "power_profit":0
            }
        }
    ]
}
```

```

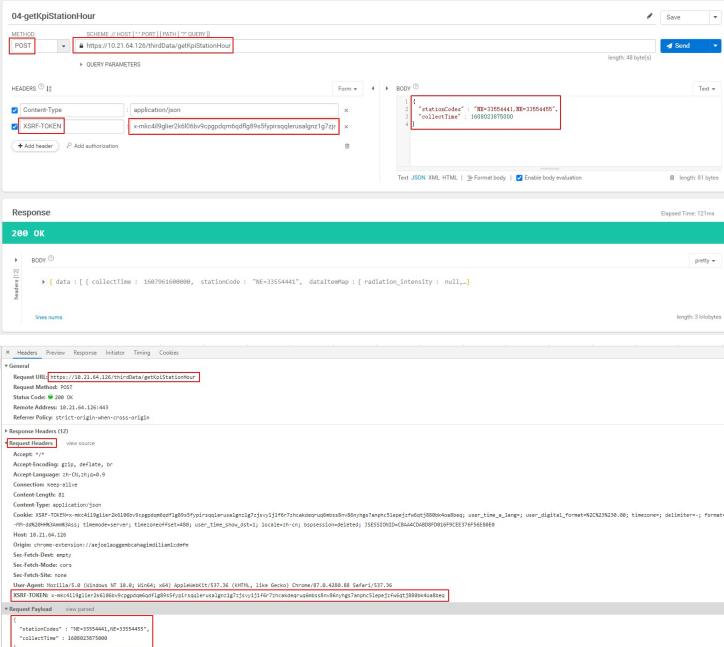
        },
        "stationCode": "5D02E8B40AD342159AC8D8A2BCD4FAB5",
        "collectTime": 1501884000000
    },
    {
        "dataItemMap": {
            "radiation_intensity": null,
            "theory_power": null,
            "inverter_power": 0,
            "ongrid_power": null,
            "power_profit": 0
        },
        "stationCode": "5D02E8B40AD342159AC8D8A2BCD4FAB5",
        "collectTime": 1501887600000
    },
    {
        "dataItemMap": {
            "radiation_intensity": null,
            "theory_power": null,
            "inverter_power": 0,
            "ongrid_power": null,
            "power_profit": 0
        },
        "stationCode": "BA4372D08E014822AB065017416F254C",
        "collectTime": 1501887600000
    }
],
"failCode": 0,
"params": {
    "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
    "collectTime": 1501862400000,
    "currentTime": 1503046597854
},
"message": null
}

```

NOTE

Prerequisites for obtaining data: The user has the permission to access this interface.

Request example:



The screenshot shows a POST request to `https://10.21.64.126/thirdData/getKpiStationHour`. The request body is a JSON object:

```

{
    "stationCode": "NE+33554441",
    "collectTime": 1507951600000
}

```

The response is a 200 OK status with the following JSON payload:

```

{
    "data": [
        {
            "collectTime": 1507951600000,
            "stationCode": "NE+33554441",
            "dataItemMap": {
                "radiation_intensity": null
            }
        }
    ]
}

```

Daily Plant Data Interface

Interface Description

This interface is used to obtain daily plant data. Data of a maximum of 100 plants can be queried at a time.

The backend calculates the month of the collection time based on the request parameter **collectTime** (collection time in milliseconds) and the time zone where the plant is located. Then, you can query the daily data of the plant by plant ID in the current month. If data is generated for n ($0 \leq n \leq 31$) days of the month, n ($0 \leq n \leq 31$) results are returned.

For details about the data list that can be queried using this interface, see [Daily Plant Data Interface](#).

Request URL

[https://\[Domain name of the management system\]/thirdData/getKpiStationDay](https://[Domain name of the management system]/thirdData/getKpiStationDay)

Request Mode

HTTP method: POST

Access Restrictions

Traffic limiting is performed based on the number of plants managed by northbound API users. Number of northbound API calls per user per day = Roundup (Number of plants/100) + 24

Only one concurrent request is supported per minute.

If the access frequency exceeds the limit, the interface returns error code 407.

Example:

If a user manages 20 plants, the maximum number of API calls per day = Roundup (20/100) + 24 = 1 + 24 = 25.

If a user manages 120 plants, the maximum number of API calls per day = Roundup (120/100) + 24 = 2 + 24 = 26.

Request Parameters

Parameter	Description	Data Type	Mandatory/Optional
stationCodes	Plant ID list. Multiple plant IDs are separated by commas (,). Plant IDs are obtained from plantCode in Plant List Interface .	String	Mandatory
collectTime	Collection time, in milliseconds	Long	Mandatory

Response Packet

Parameter	Description	Data Type	Remarks
success	Request success or failure flag true: The request succeeded. false: The request failed.	Boolean	Request success or failure flag
failCode	Error code Value 0 indicates that the status is normal. For definitions of other error codes, see Error Code List .	Integer	-
params	Parameters	-	-
	stationCodes	Plant ID list in the request parameter	String
	collectTime	Collection time in milliseconds in the request parameter	Long
	currentTime	Current system time, in milliseconds	Long
message	Optional message	String	-
data	Parameters	Returned data. The data contains the daily data object list of each plant.	List Daily data list of a plant in a month
	stationCode	Plant ID	String

Parameter	Description	Data Type	Remarks
collectTime	Collection time, in milliseconds	Long	-
dataItemMap	Content of each data item, which is returned in the key-value format. For details about the data item list, see Daily Plant Data Interface .	Map	-

Example

Request example:

```
{
  "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
  "collectTime": 1501862400000
}
```

Response example:

Example 1: An error code is returned.

```
{
  "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
  "collectTime": 1501862400000
}
```

Example 2: Daily plant data is returned.

```
{
  "success": true,
  "data": [
    {
      "dataItemMap": {
        "use_power": 288760,
        "radiation_intensity": 0.6968,
        "reduction_total_co2": 18.275,
        "reduction_total_coal": 7.332,
        "theory_power": 17559.36,
        "ongrid_power": 18330,
        "power_profit": 34320,
        "installed_capacity": 25200,
        "perpower_ratio": 0.727,
        "inverter_power": 18330,
        "reduction_total_tree": 999,
        "performance_ratio": 89
      },
      "stationCode": "5D02E8B40AD342159AC8D8A2BCD4FAB5",
      "collectTime": 1501776000000
    },
    {
      "dataItemMap": {
        "use_power": null,
        "radiation_intensity": 1.4123,
        "reduction_total_co2": 0.897,
        "reduction_total_coal": 0.36,
        "theory_power": 659.6,
        "ongrid_power": null,
        "power_profit": 2088,
        "installed_capacity": 467.04,
        "perpower_ratio": 1.927,
        "inverter_power": 18330,
        "reduction_total_tree": 49,
        "performance_ratio": 89
      },
      "stationCode": "BA4372D08E014822AB065017416F254C",
      "collectTime": 1501776000000
    }
  ],
  "failCode": 0,
  "params": {}
```

```

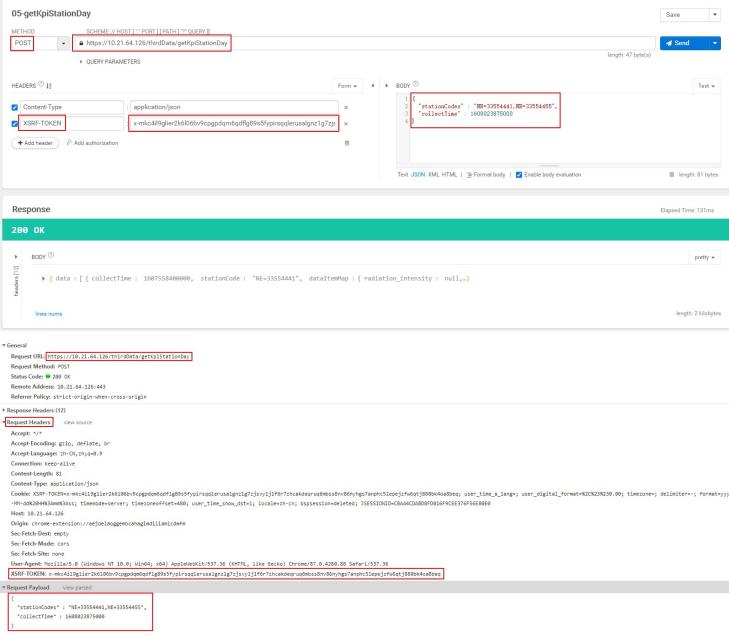
    "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
    "collectTime": 1501862400000,
    "currentTime": 1503046597854
},
"message": null
}

```

NOTE

Prerequisites for obtaining data: The user has the permission to access this interface.

Request example:



The screenshot shows a POST request to `/thirdData/getKpiStationDay`. The request body is a JSON object:

```

{
  "stationCode": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
  "collectTime": 1501862400000
}

```

The response is a 200 OK status with the following data:

```

{
  "data": [
    {
      "collectTime": 1501862400000,
      "stationCode": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
      "dataItemMap": {}
    }
  ]
}

```

Monthly Plant Data Interface

Interface Description

This interface is used to obtain monthly plant data. Data of a maximum of 100 plants can be queried at a time.

The backend calculates the year of the collection time based on the request parameter **collectTime** (collection time in milliseconds) and the time zone where the plant is located. Then, you can query the monthly data of the plant by plant ID in the current year. If data is generated for n ($0 \leq n \leq 12$) months of the year, n ($0 \leq n \leq 12$) results are returned.

For details about the data list that can be queried using this interface, see [Monthly Plant Data Interface](#).

Request URL

`https://{{Domain name of the management system}}/thirdData/getKpiStationMonth`

Request Mode

HTTP method: POST

Access Restrictions

Traffic limiting is performed based on the number of plants managed by northbound API users. Number of northbound API calls per user per day = Roundup (Number of plants/100) + 24

Only one concurrent request is supported per minute.

If the access frequency exceeds the limit, the interface returns error code 407.

Example:

If a user manages 20 plants, the maximum number of API calls per day = Roundup (20/100) + 24 = 1 + 24 = 25.

If a user manages 120 plants, the maximum number of API calls per day = Roundup (120/100) + 24 = 2 + 24 = 26.

Request Parameters

Parameter	Description	Data Type	Mandatory/ Optional
stationCodes	Plant ID list. Multiple plant IDs are separated by commas (,). Plant IDs are obtained from plantCode in Plant List Interface .	String	Mandatory
collectTime	Collection time, in milliseconds	Long	Mandatory

Response Packet

Parameter	Description		Data Type	Remarks
success	Request success or failure flag true: The request succeeded. false: The request failed.		Boolean	Request success or failure flag
failCode	Error code Value 0 indicates that the status is normal. For definitions of other error codes, see Error Code List .		Integer	-
params	Parameters	-	-	-
	stationCodes	Plant ID list in the request parameter	String	-
	collectTime	Collection time in milliseconds in the request parameter	Long	-
	currentTime	Current system time, in milliseconds	Long	-
message		Optional message	String	-
data	Parameters	Returned data. The data contains the monthly data object list of each plant.	List	Monthly data list of a plant in a year
	stationCode	Plant ID	String	-
	collectTime	Collection time, in milliseconds	Long	-
	dataItemMap	Content of each data item, which is returned in the key-value format. For details about the data item list, see Monthly Plant Data Interface .	Map	-

Example

Request example:

```
{
  "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
  "collectTime": 1501862400000
}
```

Response example:

Example 1: An error code is returned.

```
{
  "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
  "collectTime": 1501862400000
}
```

Example 2: Monthly plant data is returned.

```
{
  "success": true,
```

```

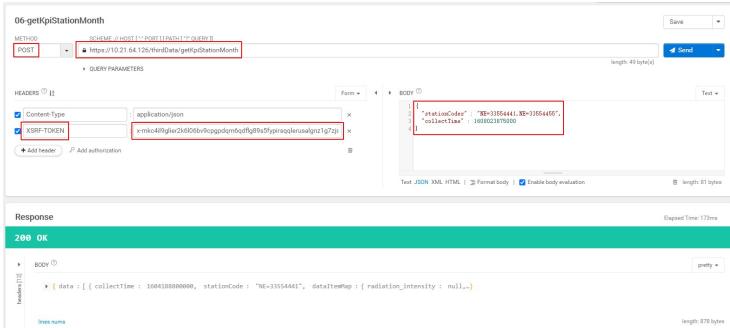
"data": [
  {
    "dataItemMap": {
      "use_power": 288760,
      "radiation_intensity": 0.6968,
      "reduction_total_co2": 18.275,
      "reduction_total_coal": 7.332,
      "inverter_power": null,
      "theory_power": 17559.36,
      "ongrid_power": 18330,
      "power_profit": 34320,
      "installed_capacity": 25200,
      "perpower_ratio": 0.727,
      "reduction_total_tree": 999,
      "performance_ratio": 89
    },
    "stationCode": "5D02E8B40AD342159AC8D8A2BCD4FAB5",
    "collectTime": 1501516800000
  },
  {
    "dataItemMap": {
      "use_power": null,
      "radiation_intensity": 1.4123,
      "reduction_total_co2": 0.897,
      "reduction_total_coal": 0.36,
      "inverter_power": null,
      "theory_power": 659.6,
      "ongrid_power": null,
      "power_profit": 2088,
      "installed_capacity": 467.04,
      "perpower_ratio": 1.927,
      "reduction_total_tree": 49,
      "performance_ratio": 89
    },
    "stationCode": "BA4372D08E014822AB065017416F254C",
    "collectTime": 1501516800000
  }
],
"failCode": 0,
"params": {
  "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
  "collectTime": 1501862400000,
  "currentTime": 1503046597854
},
"message": null
}

```

NOTE

Prerequisites for obtaining data: The user has the permission to access this interface.

Request example:



The screenshot shows a POSTman interface with the following details:

- METHOD:** POST
- URL:** https://10.21.64.126/thirdparty/getKpiStationMonth
- HEADERS:**
 - Content-Type: application/json
 - XSRF-TOKEN: emr4c40/glwz2xd0bvrccopgdn0eqflg9is5yprisoqleusavlgnc1g729
- BODY:**

```
{
  "stationCode": "5D02E8B40AD342159AC8D8A2BCD4FAB5",
  "collectTime": 1501516800000
}
```
- Response:**

200 OK

```
{
  "data": [
    {
      "stationCode": "5D02E8B40AD342159AC8D8A2BCD4FAB5",
      "collectTime": 1501516800000,
      "radiation_intensity": 0.6968,
      "reduction_total_co2": 18.275,
      "reduction_total_coal": 7.332,
      "inverter_power": null,
      "theory_power": 17559.36,
      "ongrid_power": 18330,
      "power_profit": 34320,
      "installed_capacity": 25200,
      "perpower_ratio": 0.727,
      "reduction_total_tree": 999,
      "performance_ratio": 89
    }
  ]
}
```

Yearly Plant Data Interface

Interface Description

This interface is used to obtain yearly plant data. Data of a maximum of 100 plants can be queried at a time.

Based on the plant ID, the backend queries the data of each year since the plant was constructed (including the current year).

For details about the data list that can be queried using this interface, see [Yearly Plant Data Interface](#).

Request URL

<https://Domain name of the management system/thirdData/getKpiStationYear>

Request Mode

HTTP method: POST

Access Restrictions

Traffic limiting is performed based on the number of plants managed by Northbound API users. Number of northbound API calls per user per day = Roundup (Number of plants/100) + 24

Only one concurrent request is supported per minute.

If the access frequency exceeds the limit, the interface returns error code 101.

Example:

If a user manages 20 plants, the maximum number of API calls per day = Roundup(20/100) * 24 = 1 * 24 = 23.

If a user manages 120 plants, the maximum number of API calls per day = Roundup ($120/100$) * 24 = 2 * 24 = 48.

Request Parameters

Parameter	Description	Data Type	Mandatory/Optional
stationCodes	Plant ID list. Multiple plant IDs are separated by commas (,). Plant IDs are obtained from plantCode in Plant List Interface .	String	Mandatory
collectTime	Collection time, in milliseconds	Long	Mandatory

Response Packet

Parameter	Description	Data Type	Remarks
success	Request success or failure flag true: The request succeeded. false: The request failed.	Boolean	Request success or failure flag
failCode	Error code Value 0 indicates that the status is normal. For definitions of other error codes, see Error Code List .	Integer	-
params	Parameters	-	-

Parameter		Description	Data Type	Remarks
stationCodes		Plant ID list in the request parameter	String	-
collectTime		Collection time in milliseconds in the request parameter	Long	-
currentTime		Current system time, in milliseconds	Long	-
message		Optional message	String	-
data	Parameters	Returned data. The data contains the yearly data object list of each plant.	List	Yearly data list of the plant since its construction
	stationCode	Plant ID	String	-
	collectTime	Collection time, in milliseconds	Long	-
	dataItemMap	Content of each data item, which is returned in the key-value format. For details about the data item list, see Yearly Plant Data Interface .	Map	-

Example

Request example:

```
{
  "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
  "collectTime": 1501862400000
}
```

Response example:

Example 1: An error code is returned.

```
{
  "success": false,
  "data": null,
  "failCode": 20009,
  "params": {
    "stationCodes": "BA4372D08E014822AB065017416F254C,5D02E8B40AD342159AC8D8A2BCD4FAB5",
    "collectTime": 1501862400000,
    "currentTime": 1503046597854
  },
  "message": null
}
```

Example 2: Yearly plant data is returned.

```
{
  "success": true,
  "data": [
    {
      "dataItemMap": {
        "use_power": 288760,
        "radiation_intensity": 0.6968,
        "reduction_total_co2": 18.275,
        "reduction_total_coal": 7.332,
        "inverter_power": null,
        "theory_power": 17559.36,
        "ongrid_power": 18330,
        "power_profit": 34320,
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        "perpower_ratio": 0.727,
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    }
  ]
}
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            "reduction_total_co2": 0.897,
            "reduction_total_coal": 0.36,
            "inverter_power": null,
            "theory_power": 659.6,
            "ongrid_power": null,
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"params": {
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