

```

<tdl xmlns="http://www.nema.org/1997/C1219TDLSchema"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  title="AMERICAN NATIONAL STANDARD C12.19-1997 Utility Industry End Device Data Tables"
  version="1.0"
  standard="http://www.nema.org/1997/C12.19-1997"
  registry="NEMA"
  isoBranch="1.2.840.10066.0"
  deviceClass="0.1.0">
    
```

Table-Set Definitions
for
AMERICAN NATIONAL STANDARD C12.19-1997
Utility Industry End Device Data Tables
Version 1.0
1.2.840.10066.0.0.1.0

Reference Standard: http://www.nema.org/1997/C12.19-1997
Registered to: NEMA
ISO Branch: 1.2.840.10066.0
End-Device relative class: 0.1.0 (Standard class)

```

<decade name="TIME_OF_USE_DEC" number="5" label="Time-of-use tables">
  <description>
    The tables in this decade provide information related to end device Date and Time and Time Of Use (TOU) operation.
  </description>
  <!-- Add your decade scope type definitions here. -->
    
```

9.1 Decade 5: Time-of-use tables (TIME_OF_USE_DEC)
 The tables in this decade provide information related to end device Date and Time and Time Of Use (TOU) operation.

```

<table name="CLOCK_STATE_TBL" number="55" type="CLOCK_STATE_RCD"
  label="Clock state table">
  <description>
    This table provides the end device real time clock information.
  </description>
    
```

9.1.1 Standard defined types
 None defined outside tables.

9.1.1.1 Standard table 55 : Clock state table (CLOCK_STATE_TBL)
 This table provides the end device real time clock information.

9.1.1.2 Standard table 55: Defined types

```

<bitField name="STATUS_BFLD" type="UINT16">
  <description>Array of status entries of each TOU set.</description>
  <if condition="ACT_TIME_TOU_TBL.SEPARATE_SUM_DEMANDS_FLAG">
    <then>
      <subElement name="CURR_SUMM_TIER" type="UINT"
        startBitInclusive="0" endBitInclusive="2">
        <description>
          Active tier corresponding to summations. This variable is only used when the capability flag ACT_TIME_TOU_TBL.SEPARATE_SUM_DEMANDS_FLAG (Table 51) = TRUE.
        </description>
      </subElement>
      <subElement name="CURR_DEMAND_TIER" type="UINT"
        startBitInclusive="3" endBitInclusive="5">
        <description>
          Active tier corresponding to demands. This variable is only used when the capability flag ACT_TIME_TOU_TBL.SEPARATE_SUM_DEMANDS_FLAG (Table 51) == TRUE.
        </description>
      </subElement>
    </then>
  </if>
</bitField>
    
```

```

TYPE STATUS_BFLD = BIT FIELD OF UINT16
IF ACT_TIME_TOU_TBL.SEPARATE_SUM_DEMANDS_FLAG THEN
  CURR_SUMM_TIER : UINT(0..2);
  CURR_DEMAND_TIER : UINT(3..5);
ELSE
  CURR_TIER : UINT(0..2);
  FILLER : FILL(3..5);
END;
TIER_DRIVE : UINT(6..7);
SPECIAL_SCHD_ACTIVE : UINT(8..11);
SEASON : UINT(12..15);
END;

TYPE CLOCK_STATE_RCD = PACKED RECORD
  CLOCK_CALENDAR : LTIME_DATE;
  TIME_DATE_QUAL : CLOCK_TBL.TIME_DATE_QUAL_BFLD;
  STATUS : STATUS_BFLD;
END;

TABLE 55 CLOCK_STATE_TBL = CLOCK_STATE_RCD;
    
```

```

</then>
<else>
  <subElement name="CURR_TIER" type="UINT"
    startBitInclusive="0" endBitInclusive="2">
    <description>
      Number representing the tier that is currently active in the meter. This variable is only used when the capability flag ACT_TIME_TOU_TBL.SEPARATE_SUM_DEMANDS_FLAG (Table 51) = FALSE.
    </description>
  </subElement>
  <subElement name="FILLER" type="FILL"
    startBitInclusive="3" endBitInclusive="5"/>
</else>
</if>
<subElement name="TIER_DRIVE" type="UINT"
  startBitInclusive="6" endBitInclusive="7">
  <description>Tier drive source code.</description>
  <enumerator>
    <enum value="0" text="Tier selection is controlled by CALENDAR_TBL.TIER_SWITCHES (Table 54)"/>
    <enum value="1" text="Tier selection is not controlled by this standard"/>
    <enum value="2" text="Tier selection is not controlled by this standard"/>
    <enum value="3" text="Tier selection is not controlled by this standard"/>
  </enumerator>
  <subElement name="SPECIAL_SCHD_ACTIVE" type="UINT"
    startBitInclusive="8" endBitInclusive="11">
    <enumerator>
      <enum value="0" text="Special schedule 0 active"/>
      <enum value="1" text="Special schedule 1 active"/>
      <enum value="2" text="Special schedule 2 active"/>
      <enum value="3" text="Special schedule 3 active"/>
      <enum value="4" text="Special schedule 4 active"/>
      <enum value="5" text="Special schedule 5 active"/>
      <enum value="6" text="Special schedule 6 active"/>
      <enum value="7" text="Special schedule 7 active"/>
      <enum value="8" text="Special schedule 8 active"/>
      <enum value="9" text="Special schedule 9 active"/>
      <enum value="10" text="Special schedule 10 active"/>
      <enum value="11" text="Special schedule 11 active"/>
      <enum value="15" text="No special schedule active"/>
    </enumerator>
  </subElement>
</subElement>
    
```

Identifier /sub-identifier	Value	Definition
STATUS_BFLD		Array of status entries of each TOU set.
CURR_SUMM_TIER		Active tier corresponding to summations. This variable is only used when the capability flag ACT_TIME_TOU_TBL.SEPARATE_SUM_DEMANDS_FLAG (Table 51) = TRUE.
CURR_DEMAND_TIER		Active tier corresponding to demands. This variable is only used when the capability flag ACT_TIME_TOU_TBL.SEPARATE_SUM_DEMANDS_FLAG (Table 51) = TRUE.
CURR_TIER		Number representing the tier that is currently active in the meter. This variable is only used when the capability flag ACT_TIME_TOU_TBL.SEPARATE_SUM_DEMANDS_FLAG (Table 51) == FALSE.
TIER_DRIVE	0	Tier drive source code.
	1	Tier selection is controlled by CALENDAR_TBL.TIER_SWITCHES (Table 54).
	2	Tier selection is not controlled by this standard.
	3	Tier selection is not controlled by this standard.
SPECIAL_SCHD_ACTIVE	0	Special schedule 0 active.
	1	Special schedule 1 active.
	2	Special schedule 2 active.
	3	Special schedule 3 active.
	4	Special schedule 4 active.
	5	Special schedule 5 active.
	6	Special schedule 6 active.
	7	Special schedule 7 active.
	8	Special schedule 8 active.
	9	Special schedule 9 active.
	10	Special schedule 10 active.
	11	Special schedule 11 active.
	15	No special schedule active.

■ Required element name
 ■ Required attribute name
 ■ XML keyword
 ■ TDL Default value
 ■ Optional attribute value document text.
■ Optional element name
 ■ Optional attribute name
■ C12.19 keyword or symbol
■ C12.19 built-in type

	Identifier/sub-identifier	Value	Definition
<pre> </subElement> <subElement name="SEASON" type="UINT" startBitInclusive="12" endBitInclusive="15"> <description>Current end device season number.</description> </subElement> </bitField> <packedRecord name="CLOCK_STATE_RCD"> <element name="CLOCK_CALENDAR" type="LTIME_DATE"> <description>Current end device time.</description> </element> <element name="TIME_DATE_QUAL" type="CLOCK_TBL.TIME_DATE_QUAL_BFLD"/> <element name="STATUS" type="STATUS_BFLD"/> </packedRecord> </table> </decade> </td> </pre>	SEASON		Current end device season number.
	CLOCK_STATE_RCD		
	CLOCK_CALENDAR		Current end device time.