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<?xml version = "1.0" encoding = "ISO-8859-1"?>

<!-- Simple Types Schema for GISB v1.0 Draft 2001/05/28 -->

<xsd:schema xmlns:xsd = "http://www.w3.org/2000/10/XMLSchema"
  xmlns = "http://www.gisb.org/"
  targetNamespace = "http://www.gisb.org/">

<!-- -->
  <xsd:simpleType name = "actualIntervalLength">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "15"/>
      <xsd:enumeration value = "30"/>
      <xsd:enumeration value = "60"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "addressValLength">
    <xsd:restriction base = "xsd:string">
      <xsd:minLength value = "5"/>
      <xsd:maxLength value = "9"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "billingMethod">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "DistributorRateReady"/>
      <xsd:enumeration value = "DistributorBillReady"/>
      <xsd:enumeration value = "RetailerBillReady"/>
      <xsd:enumeration value = "RetailerRateReady"/>
      <xsd:enumeration value = "Split"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "billPurpose">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "Original"/>
      <xsd:enumeration value = "Final"/>
      <xsd:enumeration value = "Cancel"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "chargeCategory">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "Commodity"/>
      <xsd:enumeration value = "Customer"/>
      <xsd:enumeration value = "Distribution"/>
      <xsd:enumeration value = "Transmission"/>
      <xsd:enumeration value = "WholesaleMarketService"/>
      <xsd:enumeration value = "DebtRetirement"/>
      <xsd:enumeration value = "RuralRateAssistance"/>
      <xsd:enumeration value = "MarketPowerMitigation"/>
      <xsd:enumeration value = "RetailServiceCharges"/>
      <xsd:enumeration value = "SSSCharges"/>
      <xsd:enumeration value = "Taxes"/>
      <xsd:enumeration value = "IMO"/>
      <xsd:enumeration value = "RSVA"/>
    </xsd:restriction>
  </xsd:simpleType>

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        <xsd:enumeration value = "Miscellaneous"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "commodityType">
    <xsd:restriction base = "xsd:string">
        <xsd:enumeration value = "Electric"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "date">
    <xsd:restriction base = "xsd:string">
        <xsd:minLength value = "8"/>
        <xsd:maxLength value = "8"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "dateTime">
    <xsd:restriction base = "xsd:string">
        <xsd:minLength value = "14"/>
        <xsd:maxLength value = "14"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "dateTimeSecond">
    <xsd:restriction base = "xsd:string">
        <xsd:minLength value = "19"/>
        <xsd:maxLength value = "19"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "PaymentDate">
    <xsd:restriction base = "xsd:string">
        <xsd:minLength value = "1"/>
        <xsd:maxLength value = "2"/>
    </xsd:restriction>
    <xsd:restriction>
        <xsd:enumeration value = "1"/>
        <xsd:enumeration value = "2"/>
        <xsd:enumeration value = "3"/>
        <xsd:enumeration value = "4"/>
        <xsd:enumeration value = "5"/>
        <xsd:enumeration value = "6"/>
        <xsd:enumeration value = "7"/>
        <xsd:enumeration value = "8"/>
        <xsd:enumeration value = "9"/>
        <xsd:enumeration value = "10"/>
        <xsd:enumeration value = "11"/>
        <xsd:enumeration value = "12"/>
        <xsd:enumeration value = "13"/>
        <xsd:enumeration value = "14"/>
        <xsd:enumeration value = "15"/>
        <xsd:enumeration value = "16"/>
        <xsd:enumeration value = "17"/>
        <xsd:enumeration value = "18"/>
        <xsd:enumeration value = "19"/>
    </xsd:restriction>
</xsd:simpleType>

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        <xsd:enumeration value = "20"/>
        <xsd:enumeration value = "21"/>
        <xsd:enumeration value = "22"/>
        <xsd:enumeration value = "23"/>
        <xsd:enumeration value = "24"/>
        <xsd:enumeration value = "25"/>
        <xsd:enumeration value = "26"/>
        <xsd:enumeration value = "27"/>
        <xsd:enumeration value = "28"/>
        <xsd:enumeration value = "29"/>
        <xsd:enumeration value = "30"/>
        <xsd:enumeration value = "31"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "PartyType">
    <xsd:restriction base = "xsd:string">
        <xsd:minLength value = "1"/>
        <xsd:maxLength value = "10"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->

<xsd:simpleType name = "TransporterContractNumber">
    <xsd:restriction base = "xsd:string">
        <xsd:minLength value = "1"/>
        <xsd:maxLength value = "30"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "TypeOfAccount">
    <xsd:restriction base = "xsd:NMTOKEN">
        <xsd:enumeration value = "Checking"/>
        <xsd:enumeration value = "Savings"/>
    </xsd:restriction>
    <xsd:restriction>
        <xsd:minLength value = "1"/>
        <xsd:maxLength value = "15"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "languagePreference">
    <xsd:restriction base = "xsd:string">
        <xsd:enumeration value = "English"/>
        <xsd:enumeration value = "French"/>
        <xsd:enumeration value = "Bilingual"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "lengthTwo">
    <xsd:restriction base = "xsd:string">
        <xsd:minLength value = "1"/>
        <xsd:maxLength value = "2"/>
    </xsd:restriction>
</xsd:simpleType>

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<!-- -->
  <xsd:simpleType name = "lengthThree">
    <xsd:restriction base = "xsd:string">
      <xsd:minLength value = "1"/>
      <xsd:maxLength value = "3"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "lengthFour">
    <xsd:restriction base = "xsd:string">
      <xsd:minLength value = "1"/>
      <xsd:maxLength value = "4"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "lengthFive">
    <xsd:restriction base = "xsd:string">
      <xsd:minLength value = "1"/>
      <xsd:maxLength value = "5"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "lengthNine">
    <xsd:restriction base = "xsd:string">
      <xsd:minLength value = "1"/>
      <xsd:maxLength value = "9"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "lengthTen">
    <xsd:restriction base = "xsd:string">
      <xsd:minLength value = "1"/>
      <xsd:maxLength value = "10"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "lengthTwelve">
    <xsd:restriction base = "xsd:string">
      <xsd:minLength value = "1"/>
      <xsd:maxLength value = "12"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "lengthThirteen">
    <xsd:restriction base = "xsd:string">
      <xsd:minLength value = "1"/>
      <xsd:maxLength value = "13"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "lengthFifteen">
    <xsd:restriction base = "xsd:string">
      <xsd:minLength value = "1"/>
      <xsd:maxLength value = "15"/>
    </xsd:restriction>
  </xsd:simpleType>
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        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "lengthTwenty">
        <xsd:restriction base = "xsd:string">
            <xsd:minLength value = "1"/>
            <xsd:maxLength value = "20"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "lengthThirty">
        <xsd:restriction base = "xsd:string">
            <xsd:minLength value = "1"/>
            <xsd:maxLength value = "30"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "lengthFiftyFive">
        <xsd:restriction base = "xsd:string">
            <xsd:minLength value = "1"/>
            <xsd:maxLength value = "55"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "lengthSixty">
        <xsd:restriction base = "xsd:string">
            <xsd:minLength value = "1"/>
            <xsd:maxLength value = "60"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "lengthEighty">
        <xsd:restriction base = "xsd:string">
            <xsd:minLength value = "1"/>
            <xsd:maxLength value = "80"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "length250">
        <xsd:restriction base = "xsd:string">
            <xsd:minLength value = "1"/>
            <xsd:maxLength value = "250"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "length8000">
        <xsd:restriction base = "xsd:string">
            <xsd:minLength value = "1"/>
            <xsd:maxLength value = "8000"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "measure">
        <xsd:restriction base = "xsd:string">
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        <xsd:enumeration value = "Estimate"/>
        <xsd:enumeration value = "Read"/>
        <xsd:enumeration value = "Unmetered"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "measurementSignificance">
    <xsd:restriction base = "xsd:string">
        <xsd:enumeration value = "OnPeak"/>
        <xsd:enumeration value = "OffPeak"/>
        <xsd:enumeration value = "Total"/>
        <xsd:enumeration value = "EarlyShoulder"/>
        <xsd:enumeration value = "Shoulder"/>
        <xsd:enumeration value = "LateShoulder"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "meterRequestActivity">
    <xsd:restriction base = "xsd:string">
        <xsd:enumeration value = "Add"/>
        <xsd:enumeration value = "Remove"/>
        <xsd:enumeration value = "Exchange"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "meterMaintenanceActivity">
    <xsd:restriction base = "xsd:string">
        <xsd:enumeration value = "Add"/>
        <xsd:enumeration value = "Remove"/>
        <xsd:enumeration value = "Exchange"/>
        <xsd:enumeration value = "MeterOn"/>
        <xsd:enumeration value = "MeterOff"/>
        <xsd:enumeration value = "ChangeConfig"/>
        <xsd:enumeration value = "Initial"/>
        <xsd:enumeration value = "Information"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "meterReader">
    <xsd:restriction base = "xsd:string">
        <xsd:enumeration value = "Distributor"/>
        <xsd:enumeration value = "Consumer"/>
        <xsd:enumeration value = "MSP"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "meterRole">
    <xsd:restriction base = "xsd:string">
        <xsd:enumeration value = "Add"/>
        <xsd:enumeration value = "Subtract"/>
        <xsd:enumeration value = "Ignore"/>
    </xsd:restriction>
</xsd:simpleType>

<!-- -->
<xsd:simpleType name = "months">

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        <xsd:restriction base = "xsd:string">
            <xsd:enumeration value = "January"/>
            <xsd:enumeration value = "February"/>
            <xsd:enumeration value = "March"/>
            <xsd:enumeration value = "April"/>
            <xsd:enumeration value = "June"/>
            <xsd:enumeration value = "July"/>
            <xsd:enumeration value = "May"/>
            <xsd:enumeration value = "August"/>
            <xsd:enumeration value = "September"/>
            <xsd:enumeration value = "October"/>
            <xsd:enumeration value = "November"/>
            <xsd:enumeration value = "December"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "nameValLength">
        <xsd:restriction base = "xsd:string">
            <xsd:minLength value = "1"/>
            <xsd:maxLength value = "4"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "SenderReceiverType">
        <xsd:restriction base = "xsd:string">
            <xsd:enumeration value = "LDC"/>
            <xsd:enumeration value = "HUB"/>
            <xsd:enumeration value = "ESP"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "SenderReceiverDirection">
        <xsd:restriction base = "xsd:string">
            <xsd:enumeration value = "Sender"/>
            <xsd:enumeration value = "Receiver"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "TypeOfContact">
        <xsd:restriction base = "xsd:NMTOKEN">
            <xsd:enumeration value = "Payment"/>
            <xsd:enumeration value = "Invoice"/>
            <xsd:enumeration value = "Contract"/>
            <xsd:enumeration value = "Signature"/>
        </xsd:restriction>
    </xsd:simpleType>

<!-- -->
    <xsd:simpleType name = "ContractType">
        <xsd:restriction base = "xsd:NMTOKEN">
            <xsd:enumeration value = "Base"/>
            <xsd:enumeration value = "Transportation"/>
            <xsd:enumeration value = "UpStream"/>
            <xsd:enumeration value = "DownStream"/>
            <xsd:enumeration value = "Service"/>
            <xsd:enumeration value = "Purchase"/>
            <xsd:enumeration value = "Sales"/>
            <xsd:enumeration value = "Confirmation"/>
        </xsd:restriction>
    </xsd:simpleType>

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<!-- -->
  <xsd:simpleType name = "PIPTransactionType">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "ShortTermContract"/>
      <xsd:enumeration value = "TransactionConfirmation"/>
    </xsd:restriction>
  </xsd:simpleType>
<!-- -->
  <xsd:simpleType name = "readStructure">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "NonInterval"/>
      <xsd:enumeration value = "Interval"/>
      <xsd:enumeration value = "TOU2"/>
      <xsd:enumeration value = "TOU3"/>
      <xsd:enumeration value = "TOU4"/>
    </xsd:restriction>
  </xsd:simpleType>
<!-- -->
  <xsd:simpleType name = "readIndicator">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "NextScheduledRead"/>
      <xsd:enumeration value = "SpecifiedRead"/>
      <xsd:enumeration value = "LastActualRead"/>
      <xsd:enumeration value = "OnCycle"/>
      <xsd:enumeration value = "MeterChange"/>
    </xsd:restriction>
  </xsd:simpleType>
<!-- -->
  <xsd:simpleType name = "readIndicatorChangeBillingOption">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "NextScheduledRead"/>
      <xsd:enumeration value = "SpecifiedRead"/>
      <xsd:enumeration value = "LastActualRead"/>
    </xsd:restriction>
  </xsd:simpleType>
<!-- -->
  <xsd:simpleType name = "remittanceType">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "Payment"/>
      <xsd:enumeration value = "Adjustment"/>
    </xsd:restriction>
  </xsd:simpleType>
<!-- -->
  <xsd:simpleType name = "reportedIntervalLength">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "60"/>
    </xsd:restriction>
  </xsd:simpleType>
<!-- -->
  <xsd:simpleType name = "senderOrRecipient">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "Sender"/>
      <xsd:enumeration value = "Recipient"/>
    </xsd:restriction>
  </xsd:simpleType>

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<!-- -->
  <xsd:simpleType name = "status">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "Partial"/>
      <xsd:enumeration value = "Accept"/>
      <xsd:enumeration value = "Reject"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "taxType">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "GST"/>
      <xsd:enumeration value = "PST"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "unitOfMeasure">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "kW"/>
      <xsd:enumeration value = "kWh"/>
      <xsd:enumeration value = "kVA"/>
      <xsd:enumeration value = "kVAh"/>
      <xsd:enumeration value = "kVAr"/>
      <xsd:enumeration value = "kVArh"/>
      <xsd:enumeration value = "GIGACalories"/>
      <xsd:enumeration value = "GIGAJoules"/>
      <xsd:enumeration value = "MMBTU"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "usageIndicator">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "Initial"/>
      <xsd:enumeration value = "Final"/>
      <xsd:enumeration value = "Ongoing"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "usagePurpose">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "AccountFinal"/>
      <xsd:enumeration value = "Original"/>
      <xsd:enumeration value = "Cancel"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->
  <xsd:simpleType name = "version">
    <xsd:restriction base = "xsd:string">
      <xsd:enumeration value = "1.0"/>
      <xsd:minLength value = "1"/>
      <xsd:maxLength value = "5"/>
    </xsd:restriction>
  </xsd:simpleType>

<!-- -->

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```
<xsd:simpleType name = "yesNo">
  <xsd:restriction base = "xsd:string">
    <xsd:enumeration value = "Yes"/>
    <xsd:enumeration value = "No"/>
  </xsd:restriction>
</xsd:simpleType>
</xsd:schema>
```