CLAIMS

1. A method of reporting resource flow at a metering device, the method comprising:

measuring resource flow by measuring one or more of a pressure or a flow rate;

setting a reporting rate to a default reporting rate;

transmitting communications indicating the measured resource flow to an external device at the reporting rate;

detecting seismic activity at the metering device;

determining that the seismic activity exceeds a seismic threshold;

in response to determining that the seismic activity exceeds the seismic threshold, adjusting the reporting rate to an event reporting rate, and starting an event time period; and

during the event time period, transmitting communications indicating the measured resource flow to the external device at the event reporting rate.

2. The method of claim 1, wherein detecting a seismic event comprises:

accessing sensor data comprising a measurement of movement of the metering device in one or more dimensions; and

determining that the measurement of movement is greater than a movement threshold.

3. The method of claim 1, wherein the measured resource flow is a measure of gas flow through the metering device.

4. The method of claim 1, wherein the event reporting rate is higher than the default reporting rate.

5. The method of claim 1, further comprising:

during the event time period, determining that the resource flow exceeds a flow threshold; and

in response to determining that the resource flow exceeds the flow threshold:

adjusting the reporting rate to an exception reporting rate; and

for an exception time period, transmitting communications indicating the measured resource flow to the external device at the exception reporting rate.

6. The method of claim 5, further comprising responsive to receiving a command to reset reporting, resetting the reporting rate to the default reporting rate and ending one or more of the event time period or the exception time period.

7. The method of claim 5, wherein the event reporting rate is greater than the default reporting rate and wherein the exception reporting rate is greater than the event reporting rate.

8. The method of claim 1, further comprising:

accessing additional sensor data comprising an additional measurement of movement in one or more dimensions; and

in response to identifying, from the additional measurement of movement, an additional seismic event, setting the event time period as expired and resetting the reporting rate to the default reporting rate.

9. A method of reporting resource flow at a metering device, the method comprising:

measuring resource flow by measuring one or more of a pressure or a flow rate;

while operating in a default mode:

setting a reporting rate to a default reporting rate;

transmitting communications indicating the measured resource flow to an external device at the reporting rate;

detecting seismic activity at the metering device;

determining that the seismic activity exceeds a seismic threshold; and

in response to determining that the seismic activity exceeds the seismic threshold, begin operating in an event mode;

while operating in the event mode:

adjusting the reporting rate to an event reporting rate; and

transmitting communications indicating the measured resource flow to the external device at the event reporting rate.

10. The method of claim 9, further comprising:

operating in the event mode for an event time period;

upon expiration of the event time period, operating in the default mode.

11. The method of claim 9, further comprising:

while operating in the event mode:

determining that the resource flow exceeds a flow threshold; and

in response to determining that the resource flow exceeds the flow threshold, begin operating in an exception mode;

while operating in the exception mode:

adjusting the reporting rate to an exception reporting rate; and

transmitting communications indicating the measured resource flow to the external device at the exception reporting rate.

12. The method of claim 11, wherein the event reporting rate is greater than the default reporting rate and wherein the exception reporting rate is greater than the event reporting rate.

13. The method of claim 11, further comprising:

accessing additional sensor data comprising an additional measurement of movement in one or more dimensions; and

in response to identifying, from the additional measurement of movement, an additional seismic event, returning to the default reporting mode.

14. The method of claim 11, wherein when the resource flow returns below the flow threshold, adjusting the reporting rate to the default reporting rate and returning to the event mode.

15. A metering device comprising:

a radio configured to communicate with an external device;

a seismic sensor configured to measure movement of the metering device in one or more dimensions;

a flowrate sensor configured to measure one or more of flow rate or pressure;

a processor configured to perform operations comprising:

receiving, from the flowrate sensor, a measurement of resource flow by measuring one or more of a pressure or a flow rate;

setting a reporting rate to a default reporting rate;

causing the radio to transmit a communications indicating the measured resource flow to an external device at the reporting rate;

receiving, from the seismic sensor, a measurement of seismic activity at the metering device;

determining that the measurement of seismic activity exceeds a seismic threshold;

in response to determining that the measurement of seismic activity exceeds the seismic threshold, adjusting the reporting rate to an event reporting rate, and starting an event time period; and

during the event time period, causing the radio to transmit communications indicating the measured resource flow to the external device at the event reporting rate.

16. The metering device of claim 15, wherein the seismic sensor is an accelerometer.

17. The metering device of claim 15, wherein detecting a seismic event comprises:

accessing sensor data comprising a measurement of movement of a metering device in one or more dimensions; and

determining that the measurement of movement is greater than a movement threshold.

18. The metering device of claim 15, wherein the measured resource flow is a measure of gas flow through the metering device.

19. The metering device of claim 15, the operations further comprising:

during the event time period, determining that the measurement of resource flow exceeds a flow threshold; and

in response to determining that the measured resource flow exceeds the flow threshold:

adjusting the reporting rate to an exception reporting rate, wherein the event reporting rate is higher than the event reporting rate; and

for an exception time period, transmitting communications indicating the measured resource flow to the external device at the exception reporting rate.

20. The metering device of claim 19, the operations further comprising upon receiving a command to reset reporting, resetting the reporting rate to the default reporting rate and ending one or more of the event time period or the exception time period.

21. The metering device of claim 19, the operations further comprising upon determining that the measurement of seismic activity is lower than the seismic activity threshold, resetting the reporting rate to the default reporting rate and ending one or more of the event time period or the exception time period.

22. The metering device of claim 15, the operations further comprising:

accessing additional sensor data comprising an additional measurement of movement in one or more dimensions; and

in response to identifying, from the additional measurement of movement, an additional seismic event, resetting the reporting rate to the default reporting rate.