

**PACIFIC GAS AND ELECTRIC COMPANY
SmartMeter™ CPUC Staff Inquiry
Data Response**

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PG&E Witness:	N/A	Requester:	Tom Roberts

QUESTION 1

Describe how the motion of the output shaft of a gas meter is read by the meter index (i.e. is the sensing element mechanical, optical, magnetic, etc.).

ANSWER 1

Gas meters have a rotating shaft with a “drive dog” that, in legacy meters, turned a gear in the mechanical register. In the SmartMeter™ design, this drive dog turns a mechanical shaft that is part of the Module. That shaft extends through the Module and engages the mechanical register in the same manner as in the legacy meter. In addition, the shaft has magnets. The rotation of the magnets is sensed by the Module with magnetic reed switches in a redundant fashion to increase reliability.