
VERIFIED DIRECT TESTIMONY OF JOHN M. SABOTNIK

1 **INTRODUCTION**

2 **Q1. Please state your name, business address and title.**

3 A1. My name is John M. Sabotnik. My business address is 801 East 86th Avenue,
4 Merrillville, Indiana 46410. I am employed by Northern Indiana Public
5 Service Company LLC ("NIPSCO") as Director of Major Projects.

6 **Q2. Please summarize your employment and educational background.**

7 A2. I received a Bachelor of Science in Electrical and Engineering Technology
8 from Purdue University Northwest. I have been employed by NIPSCO in
9 various departments since 1998, with a gap from 2005-2014 when I held
10 positions at other companies in the energy and utilities industry. I began
11 my employment with NIPSCO in 1998 as a Station Engineer in the
12 Generation Department before becoming a Project Manager. When I
13 rejoined NIPSCO in 2014, I served as a Manager in the Major Projects
14 organization, leading various generation, construction, and other projects
15 across the NIPSCO service territory. Since 2021, I have been involved in the
16 NIPSCO Electric advanced metering infrastructure ("AMI") program, and
17 in 2023 I was promoted to my current position of Director of Major Projects

1 overseeing the NIPSCO Electric and Gas AMI programs.

2 **Q3. What are your responsibilities as Director of Major Projects?**

3 A3. As Director of Major Projects, I oversaw both the NIPSCO Electric and Gas
4 AMI programs, in addition to providing input to other Major Projects and
5 initiatives happening across the organization. I led and managed the
6 various field, information technology, and other workstreams involved in
7 the NIPSCO Electric and Gas AMI programs, driving successful execution
8 of all deployment and implementation efforts.

9 **Q4. Have you previously testified before the Indiana Utility Regulatory**
10 **Commission ("Commission") or any other regulatory commission?**

11 A4. Yes. I submitted testimony before the Commission in NIPSCO's most recent
12 Transmission, Distribution, and Storage System Improvement Charge
13 (TDSIC) tracker filing in Cause No. 45557-TDSIC-8.

14 **Q5. What is the purpose of your direct testimony in this proceeding?**

15 A5. The purpose of my direct testimony is to: (1) provide background
16 information regarding NIPSCO's standard gas meter inspection protocol,
17 and the potential reasons why the gas meter index issue underlying this
18 investigation was not discovered during NIPSCO's standard periodic

1 testing; (2) provide an overview of how the gas meter index issue was
2 discovered during the course of NIPSCO's gas AMI Update Project (the
3 "AMI Project"), along with a description of the issue itself; and (3) describe
4 the remediation process undertaken by NIPSCO after the discovery of the
5 gas meter index issue.

6 **Q6. Are you sponsoring any attachments to your direct testimony?**

7 A6. No.

8 **GAS METER INDEX ISSUE AND NIPSCO'S STANDARD GAS METER INSPECTION**
9 **PROTOCOL**

10 **Q7. Please explain the meter index issue that is the subject of this Cause.**

11 A7. The meter index issue occurs when a mechanical gas meter records gas
12 usage incorrectly due to an improper drive rate configuration. A
13 mechanical gas meter contains two primary functional components: (1) an
14 internal measuring mechanism that physically senses gas flow, and (2) a
15 meter register, which converts the motion of that measuring mechanism
16 into a numerical record of gas usage (e.g., the number of therms). The meter
17 register's configuration determines how much gas flow corresponds to each
18 revolution of the meter's drive shaft, also known as the "drive rate." For
19 example, a common residential gas meter, the Honeywell AC-250, has a

1 drive rate of two cubic feet per revolution, meaning that each full revolution
2 of the meter's mechanical drive shaft corresponds to two cubic feet of gas
3 passing through the meter, but the drive rate for a particular meter will
4 differ between and among meter models.

5 If an individual mechanical meter register is configured to the wrong drive
6 rate, the meter register will convert the measured gas flow into usage data
7 at an incorrect rate. As a result, the meter index will advance too quickly or
8 too slowly, causing recorded gas usage to be overstated or understated.
9 This type of mismatch leads to customers being overbilled or underbilled
10 even though the meter's internal gas-measuring mechanism itself continues
11 to function properly.

12 **Q8. When is the drive rate of a meter typically configured?**

13 A8. Typically, the drive rate of a meter is configured when it is manufactured.
14 If the meter's physical index doesn't match manufacturing specifications,
15 readings will be wrong.

16 **Q9. Would an incorrect drive rate configuration be discoverable during**
17 **routine meter accuracy testing performed pursuant to 170 IAC 5-1-9?**

18 A9. No. Gas meter testing performed in accordance with 170 IAC 5-1-9

1 evaluates meter displacement accuracy within allowed tolerances and
2 confirms that gas flow moves the meter dials. Specifically, gas meters are
3 tested for accuracy and leakage using specialized devices that pass a precise
4 volume of air through the meter to measure accuracy against a known
5 standard. In simpler terms, gas meter testing checks the accuracy of the first
6 component of the meter that I described above, the internal measuring
7 mechanism that physically senses gas flow. Meter testing does not check
8 the accuracy of the meter register.

9 **Q10. Does a technician performing meter testing have visibility into the meter**
10 **register, such that they could have noticed that the drive rate was**
11 **inaccurate?**

12 A10. No. The amount of air that is used to check the accuracy of the internal
13 measuring mechanism is intentionally minimal (approximately 0.0125
14 cubic feet). Accordingly, this is not enough air to reveal anything about the
15 meter register. As I discuss below, prior to the installation of AMI modules,
16 there was no good way to check the accuracy of the meter register drive
17 rate. Additionally, there was no identified need to check the meter register
18 drive rate, as the gas meter index issue was not discovered until partway
19 through deployment of the AMI Project—so a technician performing a

1 meter test would not have known to consider this potential.

2 **Q11. Could NIPSCO have discovered this issue when it investigated high bill**
3 **complaints?**

4 A11. While theoretically possible, it would have been extremely unlikely that
5 NIPSCO could have discovered this issue when investigating a high bill
6 complaint, given the low incidence of the meter index issue and the fact that
7 high bill complaints generally stem from several common causes. When a
8 customer calls in with a high bill complaint and the complaint cannot be
9 explained through NIPSCO's standard analysis of factors, like rate
10 increases, weather changes, or increased usage, NIPSCO performs a meter
11 test using the procedures I described above. The next step typically is to
12 determine whether there is a gas leak. Therefore, NIPSCO shuts off all gas
13 appliances to determine whether the meter is still registering gas flow. If
14 NIPSCO still cannot determine the cause of the issue, the meter is replaced
15 and the original meter is taken to the meter shop for inspection. NIPSCO
16 has not found an instance where the gas meter index issue was previously
17 discovered, which is not altogether surprising given that the issue has thus
18 far impacted less than 1% of meters.

1 AMI INSTALLATION AND DISCOVERY OF METER INDEX ISSUE

2 **Q12. Since the meter index issue realistically could not have been discovered**
3 **during testing conducted in accordance with 170 IAC 5-1-9(2), how was**
4 **this issue discovered?**

5 A12. The meter index issue was discovered during the process of removing the
6 old AMR communications module from the meter, moving the existing
7 meter index to the new AMI communications module, and then installing
8 the new AMI communications module on NIPSCO's legacy gas meter
9 during deployment of the AMI Project.

10 **Q13. Please describe NIPSCO's AMI Project.**

11 A13. Through the AMI Project, NIPSCO is replacing automated meter reading
12 ("AMR") communications modules on all legacy gas meters with new
13 advanced AMI communications modules that enable two-way
14 communication between the module and the AMI headend software. In
15 other words, NIPSCO is replacing AMR (drive-by meter reading
16 technology) modules with AMI (remote radio-based technology) modules.

17 Importantly, the entire meter is not being replaced. Rather, an AMI
18 communications module is installed onto an existing gas meter set that
19 enables the automated and remote collection and sending of gas metering

1 information to NIPSCO. The AMI communications module allows NIPSCO
2 to provide customers with more frequent and enhanced usage data and
3 provides better access to alarms that notify NIPSCO of potentially
4 dangerous situations or theft and tamper attempts. The remote usage data
5 provided through AMI ultimately allowed NIPSCO to discover the
6 preexisting inaccurate meter drive register readings.

7 **Q14. Who is performing the equipment change?**

8 A14. NIPSCO's installation partner, Quanta Utility Engineering Solutions
9 ("QUES"), removes the old AMR communications module and installs the
10 new AMI communications module on NIPSCO's legacy gas meters. If the
11 meter needs to be exchanged to complete the installation of the AMI
12 communications module, a NIPSCO employee or a qualified contractor
13 completes the exchange.

14 **Q15. When will the AMI Project be completed?**

15 A15. Mass deployment of AMI modules began mid-2024, utilizing both NIPSCO
16 employees and QUES to exchange AMR communications modules with
17 AMI communications modules. As of February 28, 2026, approximately
18 553,000 gas AMI communications modules were installed, marking about

1 64% completion of the AMI Project. The AMI Project is ahead of schedule,
2 and NIPSCO anticipates it to be completed before the end of 2026.

3 **Q16. How was the meter index issue identified during the AMI Project?**

4 A16. When an AMR communications module is replaced with an AMI
5 communications module onto an existing gas meter set, the AMI module
6 becomes the meter's billing register by electronically recording gas usage
7 based on the meter's drive rate. As part of the AMI communications
8 module installation process, a technician must transfer the existing index
9 from the AMR communications module into the AMI communications
10 module, and program the appropriate drive rate into the AMI
11 communications module based on the meter model. As AMI
12 communications modules were installed on individual NIPSCO customer
13 gas meters, NIPSCO's AMI operations team performing quality
14 assurance/quality control ("QA/QC") testing began to discover that, for less
15 than 1% of gas meters, the previously installed index did not match the
16 correct drive rate for the mechanical meter model (in other words, the
17 physical index on the legacy meter was incorrect), which would have
18 predated the installation of the AMI communications module.

1 **Q17. Please explain further how the meter index issue was discovered.**

2 A17. Essentially, the discovery was made as part of NIPSCO's QA/QC process
3 during the AMI installation. Unlike AMR, AMI provides real-time visibility
4 into device data, which allows NIPSCO to perform data analysis to confirm
5 the drive rate is accurate and resolve issues much faster. The availability of
6 this system-level data allowed NIPSCO to implement a formal quality
7 control review process for the AMI project—something that simply was not
8 possible for the AMR project due to the lack of integrated data and remote
9 validation capabilities.

10 During the AMI installation, the technicians in the field took a picture of
11 the last mechanical meter register and entered the last meter read (based on
12 the position of the dials on the index) into their handheld device. The AMR
13 communications module was then exchanged with a new AMI
14 communications module (reusing the current index), and then the AMI
15 communications module was initialized to start communicating with the
16 wireless network. Once all required data fields are populated, the data is
17 uploaded to the QUES Work Order Management System (WOMS). While
18 validating the drive rates as part of the QA/QC process, NIPSCO
19 discovered that, for less than 1% of meters, the drive rate of the mechanical

1 meter register did not match the meter model's drive rate to be
2 programmed into the AMI module.

3 **Q18. When did NIPSCO realize that the gas meter index issue was a systemic**
4 **issue requiring a broader system review?**

5 A18. Since the issue impacted less than 1% of meters, the issue became apparent
6 over a period of weeks, not on a specific date. NIPSCO determined that
7 there was a problem that was not confined to a particular neighborhood or
8 area in approximately late October 2024.

9 **Q19. Was the gas meter index issue something NIPSCO expected to encounter**
10 **when performing the AMI Project?**

11 A19. No. This was not a known issue or risk that the project team expected to
12 encounter. Thus, after determining that this was a systemic issue, NIPSCO
13 began to further investigate the issue.

14 **Q20. What process did NIPSCO undertake to further investigate the issue?**

15 A20. NIPSCO reviewed all AMI module installations from the very beginning of
16 the project and captured the meter type, manufacturer, and expected drive
17 rate. NIPSCO then compared those values against both the physical index
18 drive rate and the programmed drive rate, flagging any discrepancies. Once

1 a meter was flagged, the associated photos were reviewed to determine the
2 appropriate corrective actions. After corrections were made, NIPSCO
3 verified that the updates were completed accurately and recorded the
4 completion date in the tracking system.

5 **Q21. Could the AMR communications modules that NIPSCO is replacing with**
6 **AMI communications modules have detected the gas meter index issue?**

7 A21. No. During the AMR installation period, there was no system-level data
8 flowing into NiSource platforms that would allow NIPSCO to confirm that
9 the drive rate was accurate. Validation would have had to be performed
10 manually at each individual meter. AMR technology was also limited and
11 would not have provided any indication of meter index issues once
12 installed, as AMR did not provide centralized visibility into index drive
13 rates or programming settings and had no automated validation tools.

14 AMR technology allows meter reading by remote devices as a meter reader
15 drives by the premise once a month to collect the meter reading. However,
16 AMR does not centralize metering data or allow for remote reading. AMI
17 technology, by contrast, provides centralized visibility and control of many
18 aspects of gas metering, including drive rate. In other words, during the

1 AMR installation, NIPSCO did not have system-level data flowing into
2 NiSource platforms that would have allowed verification of the drive rate.
3 The availability of system-level data was what allowed NIPSCO to
4 incorporate this level of detail into its QA/QC review process for the AMI
5 installation – something that simply was not possible with AMR due to the
6 lack of integrated data and remote validation capabilities.

7 **Q22. Does NIPSCO know what caused the meter index issue?**

8 A22. No, nor does NIPSCO know when it began and if all of the impacted meters
9 were affected at the same time. As I mentioned previously, there is really
10 no way to determine when or how the meter index issue occurred. There
11 are multiple points in time at which the issue could have originated,
12 including during manufacturing, original meter installation, retrofitting
13 NIPSCO's meters with AMR infrastructure, or at another unknown time or
14 event. It is also possible that it did not occur at the exact same time for every
15 meter—meaning some meters could have had a manufacturing error, while
16 the issue could have arisen at a different time for other meters.

17 As I mentioned above, it is possible that the meter manufacturing
18 specifications were inaccurate. It also is possible that NIPSCO, or a third-

1 party installer, programmed them incorrectly at installation. During
2 NIPSCO's AMR installation process, third-party technicians sometimes
3 removed and reinstalled meter indexes or replaced them entirely (when an
4 index had visually noticeable damage), creating opportunities for incorrect
5 index installation or programming. Finally, it is possible that the errors
6 occurred at some other time. Unfortunately, there is no way to know when
7 or what caused the problem.

8 **Q23. If the issue occurred during manufacturing or installation, is it possible**
9 **that the issue is not confined to NIPSCO meters?**

10 A23. Yes.

11 **Q24. Has the installation of AMI corrected the gas meter index issue?**

12 A24. Yes. One of the key benefits of implementing AMI is the ability to have
13 visibility over meter data attributes that would allow us to validate billing
14 against what is installed and programmed in the field. This allows us to
15 take a proactive approach to respond and correct this issue. Additionally,
16 once the AMI Program is complete, which is currently estimated to be in
17 late 2026, the gas meter index issue should be resolved.

1 CONCLUSION

2 **Q25. Does this conclude your prepared direct testimony?**

3 A25. Yes.

VERIFICATION

I, John M. Sabotnik, Director of Major Projects for Northern Indiana Public Service Company LLC, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information, and belief.

/s/ John M. Sabotnik

John M. Sabotnik

Date: March 6, 2026