UGI GAS STATEMENT NO. 8 – THOMAS N. LORD

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Docket No. R-2015-2518438

UGI Utilities, Inc. – Gas Division

Statement No. 8

Direct Testimony of
Thomas N. Lord

Topics Addressed: **UGI's Next Information Technology Enterprise (UNITE Program)**

Dated: January 19, 2016

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your full name and business address.

A. My name is Thomas N. Lord. My business address is 2525 North 12th Street, Suite 360, Reading, PA, 19612-2677.

Q. By whom are you employed and in what capacity?

A. I am employed by UGI Utilities, Inc. ("UGI") as Vice President and Chief Information Officer. UGI is a subsidiary of UGI Corporation ("UGI Corp."). UGI has two separate operating divisions: UGI Utilities, Inc. - Gas Division ("UGI Gas" or the "Company") and UGI Utilities, Inc. - Electric Division.

Q. What are your principal duties and responsibilities as Vice President and Chief Information Officer?

A. I am responsible for the strategic direction and overall management of all UGI technology functions including defining, delivering, and supporting business enabling Information Technology ("IT") solutions.

Q. What is your educational background?

A. I have a Bachelor of Science, Computer Science – Queen Mary College, University of London, United Kingdom.

Q. Please describe your professional experience.

A. I am an IT professional with over 30 years' experience in defining, delivering, managing, and supporting IT solutions. Most recently, I held the position of Director, Enterprise

Architecture and Information Systems at TECO Energy, Tampa, Florida. Previously, I held senior information technology positions at Lucent Technologies, British Telecom, and Special Data Processing Corporation. My curriculum vitae is attached to this testimony as UGI Gas Exhibit TNL-1.

Q. Please describe the purpose of your testimony.

A. I am providing testimony on behalf of UGI Gas. The primary purpose of my testimony is to discuss UGI's Next Information Technology Enterprise ("UNITE") Program. I will present an overview of the UNITE Program, describe its costs and benefits, and discuss the program's schedule. As this is a multi-year, multi-phased program, I will also discuss the components of the program that will be placed into service during the fully projected future test year ending September 30, 2017 ("FPFTY"), the related capital costs, and the associated cost reductions that will occur after the UNITE Program is implemented and the existing systems are retired from service. Additionally, I will described other pending IS projects that UGI is planning to implement by the end of the FPFTY.

Q. Mr. Lord, are you sponsoring any exhibits in this proceeding?

A. Yes. I am sponsoring the following exhibits attached to this testimony: UGI Gas Exhibit TNL-1, and UGI Gas Exhibit TNL-2.

II. UNITE PROGRAM

A. OVERVIEW

Q. Mr. Lord, please provide an overview of the UNITE Program.

A. As part of the UGI-1 initiative described in the direct testimony of Paul J. Szykman (UGI Gas Statement No. 1), the UNITE Program is a multi-year, multi-phased information system modernization program. Phase 1 of the Program entails the development and implementation of a new customer information system (CIS) to replace our two legacy mainframe CIS systems. Currently, UGI's 40-year old system serves the customers of UGI (both UGI Gas and UGI Electric) and UGI Penn Natural Gas, Inc., while a separate 20-year old system is used to serve the customers of UGI Central Penn Gas, Inc., with both systems operating in a legacy mainframe environment.

Phase 2 represents the modernization of our enterprise asset/work management system, which will allow for improved management of our assets, long-cycle maintenance work, mobile workforce, and contractors, as well as improvements and consolidation of our Geospatial Information System ("GIS"). Phase 3 of the UNITE Program will help us improve how we manage gas outages, engage in supply chain activities, and account for our plant investment.

Phase 1 of the UNITE Program will be implemented and in service before the end of the FPFTY. Phases 2 and 3 of the UNITE Program will not be placed in service until after the FPFTY. Accordingly, my testimony addresses only the issues pertaining to Phase 1 of the UNITE Program.

Q. Please discuss the specific activities that will be affected by the Phase 1 implementation.

A. The new CIS will transform the Company's ability to manage several aspects of its utility systems, including Contact Center (call center) Operations, scheduling service orders, and provide broader customer self-service options. In addition, the Company will have a more flexible tool that will enhance its billing functionality in order to adapt to changes in rates more readily, allow for more flexible online payment and account management features for customers, and allow the Company to better manage and track its credit and collections processes. With respect to the service orders, the new CIS will enable the Company to more efficiently and effectively communicate short-cycle service orders to field personnel. This more effective communication will both enable the field work to be performed more efficiently and allow the Company to more efficiently track the entire lifecycle of utility meters and meter-related devices from requisition, through operation and maintenance cycles, and to retirement. Further, the added functionality provided by the new CIS will enable the Company to access and validate data more efficiently, which will allow the Company to create, modify, and run business reports better than the current system allows. Finally, a new CIS is a key for the Company's data governance model in terms of ensuring appropriate retention of information required under regulatory and corporate data management models. Altogether, these changes will transform how more than 1,200 of our employees serve all 700,000 of our customers. In summary, the new CIS will allow the Company to more efficiently manage its entire meter-to-cash process, enable the Company to measure its performance more effectively, and significantly improve the service experience for customers.

Q. Why has UGI decided to undergo this CIS transformation now?

A. There are four primary reasons. First, the current CIS system presents significant business continuity concerns. Maintaining a workforce proficient in the legacy system has become increasingly challenging, with the average age of UGI-employed software developers being 57 years old. Having roots dating back to 1975, UGI's legacy mainframe system utilizes a technology that is no longer included in formal education programs and has not been for some time. With no replacement workforce being educated in the language and other technology used by the system, it is quickly becoming obsolete.

Second, while the Company currently provides excellent customer service, we believe that modernization of the CIS program will provide improved service to customers. This improvement will primarily be the result of the state-of-the-art technology that will enable customers to seek out and obtain information more quickly and efficiently, as well as enable service providers to do the same to provide better service to customers. Self-service for utility customer information now represents a key determinant of customer satisfaction. Indeed, customers now prefer low-touch, web portal, email, social media, and other means available only through modern technology. The new CIS will provide more effective and efficient technology solutions for our business processes, including processes that manage emergency situations, such as contact center, dispatch and field operations.

Third, UGI's workforce spends an inordinate amount of time completing manual tasks that can be automated with up-to-date systems. The newly automated systems will reduce the number of tasks required to be done manually. The reduction of manual tasks

will improve the efficiency of the workforce to perform certain emergency, asset management, and record keeping tasks.

Fourth, the topic of CIS modernization was addressed in the most recent management audit conducted by the Bureau of Audits Pennsylvania Public Utility Commission ("PA PUC") in 2012.[1] In that report, the Bureau found the following:

> Standardization of the CIS would enable all call centers to operate in a more cost efficient manner eliminating duel processes and maintenance of two systems. Additionally, call center personnel utilization would improve with the ability to cross train personnel to handle customer service calls from any call center. Finally, if all call centers utilize one system, the UGI Utility Group will be in a position to evaluate the benefits for further consolidation of the call centers and develop one set of metrics/goals for evaluation purposes.

For all of these reasons, the Company has decided to pursue the UNITE Program.

Q. What is the total cost of the UNITE Program?

A. The total UNITE Program capital investment will be $130-$150 million. UGI Gas will be allocated $63-$73 million of the total capital costs for the UNITE Program.

Q. What is the total cost of Phase 1 of the UNITE Program?

A. As I further explain below, Phase 1 of the UNITE Program will be implemented and in service before the end of the FPFTY. The total capital cost for Phase 1 of the UNITE Program will be $88.1 million. UGI Gas will be allocated $43.0 of these Phase 1 capital costs.

[1] *See* Focused Management and Operations Report of UGI Utilities, Inc. UGI Central Penn Gas, Inc. and UGI Penn Natural Gas, Inc., Pennsylvania Public Utility Commission, Bureau of Audits, April 2012

Q. What are the expected annual maintenance costs for the new CIS system?

A. The annual cost of maintaining the new CIS system with the improved features I previously described will be $1.76 million per year. UGI Gas will be allocated $859,000 of these annual maintenance costs. The calculation of the annual operating expense adjustments is discussed in the testimony of UGI Gas witness Ann P. Kelly (UGI Gas Statement No. 2) and shown in UGI Gas Exhibit A (Fully Projected), Schedule D-13.

Q. Are there viable alternatives to replacing the existing CIS systems?

A. No. Like many system improvements, an important consideration other than the direct economic cost must be the implication of not making the investment. As discussed previously, one critical consideration is that the current CIS systems are bordering on technological obsolescence. Assuming that the old systems are not replaced, UGI would eventually no longer have a workforce capable of performing the tasks necessary to maintain the system. Without essential maintenance, the system will begin to degrade, and more manual processes and workarounds will be needed, which could seriously impact the performance of the Contact Center and customer service received by customers. Declining customer service would result in increased numbers of informal and formal complaints to the Commission, or worse. That situation, while not directly measurable in dollars and cents, would be costly to customers and present an untenable situation for the Company, the Commission, and other constituents.

B. UNITE PROGRAM PHASE 1 PROJECT SCHEDULE

Q. Please discuss the schedule that has been developed for the Phase 1 project.

A. The Company has already conducted much of the necessary preliminary work by mapping out the project, confirming essential data, developing requests for proposals, and selecting software and system integration vendors. The remaining steps include developing a complete project plan, creating the business blueprint, building the functionality, testing the functionality, and then preparing for the Go-live date and deployment. The project schedule for Phase 1 contemplates an in-service, Go-live date of September 5, 2017, at which point customers will be fully served by the new CIS system. There also will be a phase to stabilize the new CIS system with the Company's other systems. A high level chart showing the duration of each step of the project is provided in UGI Gas Exhibit TNL-2.

Q. Please explain how operations will be transitioned to the new CIS systems?

A. The Company recognizes that its employees will need to transition from the old CIS systems to the new ones over a period of time. During this transition period, we plan to bring on additional call center and other resources to provide additional call center and other coverage to help manage customer call flow during the first several months after the new CIS is placed into service. This is reasonably necessary to avoid a drop off in customer of service during the interim transition period. The anticipated cost of these additional resources required during the transition period are discussed in the testimony of UGI Gas witness Ann P. Kelly (UGI Gas Statement No. 2) and shown in UGI Gas Exhibit A (Fully Projected), Schedule D-13.

Q. Please describe the activities contemplated for each step of the Phase 1 project timeline.

A. A brief description of each of the Phase 1 project steps is described below:

- **Project Planning** includes defining of goals, objectives, and high level requirements; performing data cleansing; and defining the delivery strategy.
- **Business Blueprint** includes gathering functional requirements; creating business process blueprint; performing solution fit/gap analysis; defining application and technical architecture; analyzing training and communication needs; and continuing data cleansing.
- **Building the Functionality (Realization – Build)** contemplates creating functional and technical specifications; configuring the system; designing, building, and installing development, testing and production environments; and designing and developing a training and communications plan.
- **Testing the Functionality (Realization – Test)** consists of executing product and user tests; performing mock conversions; executing technical and performance tests; testing and piloting of training materials; and assessing business readiness.
- **Go-Live Preparation and Deployment** includes performing data conversions; and deploying applications into UGI's business functions.
- **Post Go-Live Support** stabilization of new CIS with the Company's other systems.

Q. You mentioned that UGI had already selected the vendors for the software and software integration process. When did that occur?

A. The preliminary analysis and vendor selection process for the UNITE Program began in the fall of 2014. The Company studied the experience of several other utility companies to gain an understanding of the resource requirements, cost magnitudes, and processes for developing and implementing a new customer information system. CIS vendor selection began in the Spring of 2015, with a request for proposal process, interviews, and on-site demonstrations by the two vendor finalists in July 2015. The SAP Customer

Relationship and Billing ("CRB") solution was selected due to the scoring of the SAP system against the other finalist, in terms of pricing and total cost of ownership, an evaluation of how the system satisfied various business needs (Business Evaluation), the ease in managing the system (Technical Evaluation), and how the solution met our strategic needs (Industry Strategy). Factors considered by our subject matter experts included customer management, service premise management, rates, usage, billing, account management, credit and collections, service order management, inventory management, and analytics.

In terms of selecting the system integrator, UGI also held an RFP process in which 8 vendors submitted bids. Pricing considerations and qualifications eliminated all but three of the vendors, and the three shortlisted vendors were interviewed extensively as to their proposed solutions, project approach, timeline, resource plan, and pricing. As a result of this process, Deloitte Consulting was chosen for the project.

III. OTHER IS PROJECTS

Q. Mr. Lord, are there other pending IS projects that UGI is planning to implement by the end of the FPFTY ending September 30, 2017?

A. Yes. UGI is planning to implement the following IS projects by September 30, 2017.

Workstation Refresh - the replacement of obsolete workstation equipment, which will include standardization of equipment and workstation administration. The refresh of UGI's workstations will address a number of operational and cyber security related items. Standard operating system images will be established for a greatly reduced variety of workstation equipment thereby significantly simplifying the support of the environment and its end users. In addition, the refresh will eliminate certain current cyber security

gaps by removing workstation administrative privileges, implementing data at rest encryption, and enhancing remote connection capabilities.

Network Redesign - a comprehensive assessment and redesign of UGI's data/voice network to address current deficiencies and add capabilities for UNITE and other initiatives. The last comprehensive assessment/redesign was performed over five years ago. The UGI Local and Wide Area Network (LAN/WAN) redesign and upgrade will increase network capacity and resiliency. Additional bandwidth will be provided to UGI offices and remote sites to improve information systems performance and reliability. All sites with have at least a primary and backup connection to the UGI WAN. Offices critical to Customer Service and Safety (including Call Centers, Electric Division Systems Operations, and Gas Control) will have redundant physical network access paths provided by independent telecommunications vendor facilities. The new network design and equipment upgrade will ensure the UGI WAN can support planned information system enhancements.

Cyber Security Enhancements - UGI is further enhancing its cyber security capabilities. UGI will continue to deploy cyber security policies, procedures, and tools to protect utility/customer information and assets from loss, corruption, unauthorized access, use, and disclosure. Planned cyber security tools include Security Information and Event Management (SIEM), Network Access Control (NAC), End point security control, Data Loss Prevention (DLP), and host based Intrusion Detection and Prevention (IDS/IPS) solution. The enhanced security posture provided by the continued enhancement of UGI cyber security will reduce the risk of utility assets being compromised, systems degraded, or unauthorized information accessed. The procedures

and tools will enable UGI to detect, contain, and quickly respond to cyber security incidents.

Telephony System Replacement - the current system is technically obsolete and will be replaced, including handsets. The current obsolete private branch exchange (PBX) voice system and handsets will be replaced. The replacement system will improve phone system reliability and call quality. The new phone system will be deployed using the enhanced UGI LAN/WAN to reduce the risk of interruption to customer calls and to reduce the possibility of the system not performing during an emergency. The new phone system will simplify deployment and management enabling problems to be quickly resolved using centralized troubleshooting.

Q. Does this conclude your direct testimony?

A. Yes, it does.

UGI GAS EXHIBIT TNL-1

THOMAS N. LORD

SUMMARY

An Information Technology (IT) executive with strong business and technical expertise acquired from over thirty (30) years of successfully defining and executing business strategies coupled with the creation and deployment of IT solutions that align with business goals, objectives, and investments.

PROFESSIONAL EXPERIENCE

UGI UTILITIES **2015 –**

A multi-million dollar utility company, providing natural gas service throughout Pennsylvania and electric service to a number of Pennsylvanian counties.

Vice President; Chief Information Officer

Responsible for the strategic direction and overall management of all UGI Utilities IT functions including the definition, delivery, and support of business enabling IT solutions, ensuring alignment with the company's strategies.

- Establish and guide the company's technology strategy and ensure the provision of information technology solutions that are delivered so as to maximize the strategy in a manner consistent with the company's culture.
- Develop, coordinate, guide, and maintain strategic and operational IT plans in support of the overall mission and business strategy. These plans define a vision for meeting current and future information technology needs, while ensuring alignment and integration of IT with the overall vision, mission, and values of the company.
- Provide vision, strategy, tactical planning, development evaluation, and coordination of the information technology systems and solutions.
- Maintain enterprise systems architecture, defining standards and protocols for data exchange, communication, software, and interconnection of network information systems to ensure optimal performance, availability, and resilience.
- Develop, implement and test on a regular basis disaster and cyber incident recovery processes, ensuring alignment with UGI Utilities business priorities.
- Participate in the full lifecycle of IS staff development including recruitment, hiring, training, managing, coaching and terminating when appropriate. Foster a culture that promotes employee development, engagement and teamwork.

TECO ENERGY **2008 – 2015**

A multi-billion dollar utility company, providing electric service in West Central Florida, natural gas service throughout Florida and New Mexico, and coal mining operations in Kentucky and Virginia.

Director; Enterprise Architecture and Information Systems

Responsible for managing a multi-million dollar annual budget and for defining, evolving, and supporting TECO's IT solutions and ensuring alignment with the company's business strategies.

- Established a company-wide, 3-tier IT Governance Model that includes a top-tier Executive Steering Committee and uses a Portfolio Management approach to evaluating and prioritizing IT investments.
- Defined a multi-year technology consolidation and rationalization plan that is aimed at significantly reducing the number of applications and the variety of technology platforms in TECO's application portfolio.
- Led a cross-company team through the definition, selection, and Board of Director approval of SAP as TECO's Enterprise Resource Planning (ERP) platform, providing Finance and Control, Human Capital, and Supply Chain Management business capabilities.
- As the IT Program Director, managed the 18-month implementation of the ERP platform, completing on time and the overall project being under budget. The implementation won SAP's Utility Project of the year 2012.
- Participating in the definition and refinement of the company's business strategies, providing particular guidance in areas where IT can be used as a key enabler.
- Established a Business Relationship Management function that is the liaison between IT and TECO's business areas, with responsibility for being the primary point-of-contact for all IT activities.
- Guided the approach to analyze, select, acquire, and implement the trouble-tracking and resolution platform for TECO's Tampa Electric and Peoples Gas' businesses with this being one of the first cross-company solutions.
- Led the definition and implementation of a Systems Development Life-Cycle (SDLC) methodology that is used to guide and direct IT projects. A strong emphasis is placed on business process analysis to ensure full business context is captured and used to frame functionality requirements.

SPECIAL DATA PROCESSING CORPORATION **2003 – 2007**

A multi-million dollar direct marketing company specializing in optimizing clients' customer acquisition and sales opportunities.

Vice President; Chief Information Officer

Responsible for managing a multi-million dollar annual budget and for defining, evolving, and operating all aspects of Special Data Processing's IT solutions and ensuring alignment with business strategies.

- Participated in the definition and refinement of the company's business strategies, providing particular guidance in areas where IT could be a competitive differentiator and key enabler.
- Delivered business functionality in support of a single site 1,200 seat Sales Contact Center, with an additional 300 home-based sales associates. On a weekly basis the Center handled 220K inbound sales inquiries, 60K outbound sales attempts (to existing customers), and 25K Customer Service inquiries.
- Defined and created an innovate approach for processing consumer information resulting in $2+M annual savings.
- Analyzed, designed, and managed the development of functionality that established a single, consistent and consolidated, cross-enterprise view of our 100+ million consumers. Reprocessed 13 years of customer contact and sales data and established a baseline view of customer activity.
- Defined, negotiated, and contracted for an IP PBX (Cisco Call Manager), with associated voice-mail and e-mail integration, as a replacement for an existing analog PBX.
- Evaluated and conducted an initial deployment of a "thin client" desktop environment for sales associates, which would deliver a 70% reduction in equipment refresh costs.
- Created and managed a Program Management Office (PMO) that established IT request and prioritization processes and procedures to ensure appropriate focus and utilization of IT personnel and systems.
- Established an Enterprise Architecture, which included the IT Operating Model and IT personnel roles and responsibilities that were mapped to the IT methodology, encompassing the entire SDLC from Analysis through Implementation, including Maintenance.
- Created IT Application Architecture road-map that forms the basis for evolving the existing applications technology and applications and guiding new technology decisions.
- Evaluated IT operating financials and reduced annual expenditures on existing technology by 30% ($750k) while achieving technology upgrades, which included a ten-fold increase in data storage capacity and the introduction and use of "blade" servers and VMWare virtualization products.
- Reviewed and rebuilt the IT Operations group applying focus on automated system alerts that allowed greater resource availability for an enhanced Service Desk team.
- Established and executed a 90 day infrastructure stabilization plan that eliminated frequent server downtime and drastically reduced system recovery time.

LUCENT TECHNOLOGIES, INC. **1998 – 2003**

A multi-billion dollar, multi-national company specializing in the manufacture of telecommunications equipment and the delivery of associated technical services.

Director; IT Customer Relationship Solutions (2001 – 2003)

Responsible for managing a multi-million dollar annual budget allocated for the delivery of all functionality for Lucent's Customer Relationship Management (CRM) and associated Customer focused solutions.

- Led and guided the definition and evolution of Lucent's approach on Customer Relationship Management (CRM), including process and procedure definition and systems analysis, design, remote development, and global deployment.
- Delivered Sales Force Automation functionality through the implementation of Siebel Sales Enterprise software, providing business support for Account Planning, Target Account Selling, Opportunity Management, and Revenue Forecasting.
- Led the redesign of Lucent's Sales Revenue and Manufacturing Demand Forecasting processes and procedures.
- Led the rationalization of existing systems – including multiple Siebel implementations – removing functionality overlap, and consolidating systems resulting in $5M reduction in annual operating costs.

Director; IT Business Services (2000 – 2001)

Responsible for providing all IT services and solutions to Lucent's Technical Support Services business division, a multi-million dollar ($700M in fiscal year 2002) business unit that delivers technical support for all equipment

manufactured by the company, which accounts for all warranty and post-warranty maintenance and management services.

- Redesigned Lucent's Technical Support Services processes and procedures, delivered systems enhancements, and implemented related business policies.
- Conducted the integration of multiple Customer Service systems into a single, globally deployed system supporting over 10,000 end-users.

Sr. Manager; IT Strategy, Architecture, & Application Development (1998 – 2000)

Responsible for defining the IT strategy and architecture and implementing essential systems and networking solutions in support of Lucent's multi-million dollar Managed Network Services business.

- Evaluated, selected, and implemented Clarify's Customer Service and Contract Management solution thereby establishing the businesses 1st integrated CRM platform. The $6.5M implementation was completed in 6 months, globally to over 800 end-users, with supporting Interactive Voice Response (IVR), Computer Telephony Integration (CTI), and Web capabilities.
- Services business IT representative on Lucent's Mergers and Acquisition team; participated in the evaluation and integration of a multiple data equipment companies including, Ascend Communication, Livingstone, Prominet Corporation, and Yurie Systems.
- Implemented the Customer and Network Operations Center in Tampa, FL, in support of the service offers, including the design and build of the Operations facility and supporting systems, network infrastructure, and business continuity environment.
- Defined and built the data-centric IT systems architecture, including full integration to Lucent's legacy systems environment. Redefined and implemented the systems and network architecture and infrastructure supporting the Remote Managed Network Service.
- Defined and implemented the IT Operating Model, Methodology, Architecture, and Strategy. An adaptation of EDS' STRADIS® SDLC methodology was created and used to guide and direct IT projects and operational activities.

PRIOR EXPERIENCE **1980 – 1998**

- DMR Trecom, Inc.; IT Consulting Company (Tampa, FL); evaluated, hired, and managed IT consulting personnel and delivered a variety of IT client projects, including; data center design and build, network separation, network conversion, business continuity, IT organization definition, billing redesign, and Y2K compliance.
- British Telecom (BT); Syncordia, Global Telecommunications Outsourcing (Atlanta, GA); defined Syncordia's Service Offers. Implemented and managed the delivery of IT solutions in support of the global operating model, including operational procedures, data center design and build, network, and systems infrastructure. Telefónica de España, Network Traffic Management (Madrid, Spain); managed the design and build of Telefónica's Network Operations Centre and associated data center. Implemented modifications to BT's Network Traffic Management systems to align with Telefónica's requirements. National Network Traffic Management (Oswestry, UK); designed, developed, and implemented systems and related operational procedures and approaches for managing BT's entire UK national communications network, utilizing local and off-shore resources. Designed and built data centers for two of BT's management districts.
- Wellingham Computer Services; Accounting and Stock control system; designed and provided programming expertise, and for the production of the tax calculation and handling module of the system.
- Her Majesty's Civil Service; Census Systems; Systems Programmer responsible for providing operational support for a suite of mainframe computers and associated communications processors and networks.

EDUCATION

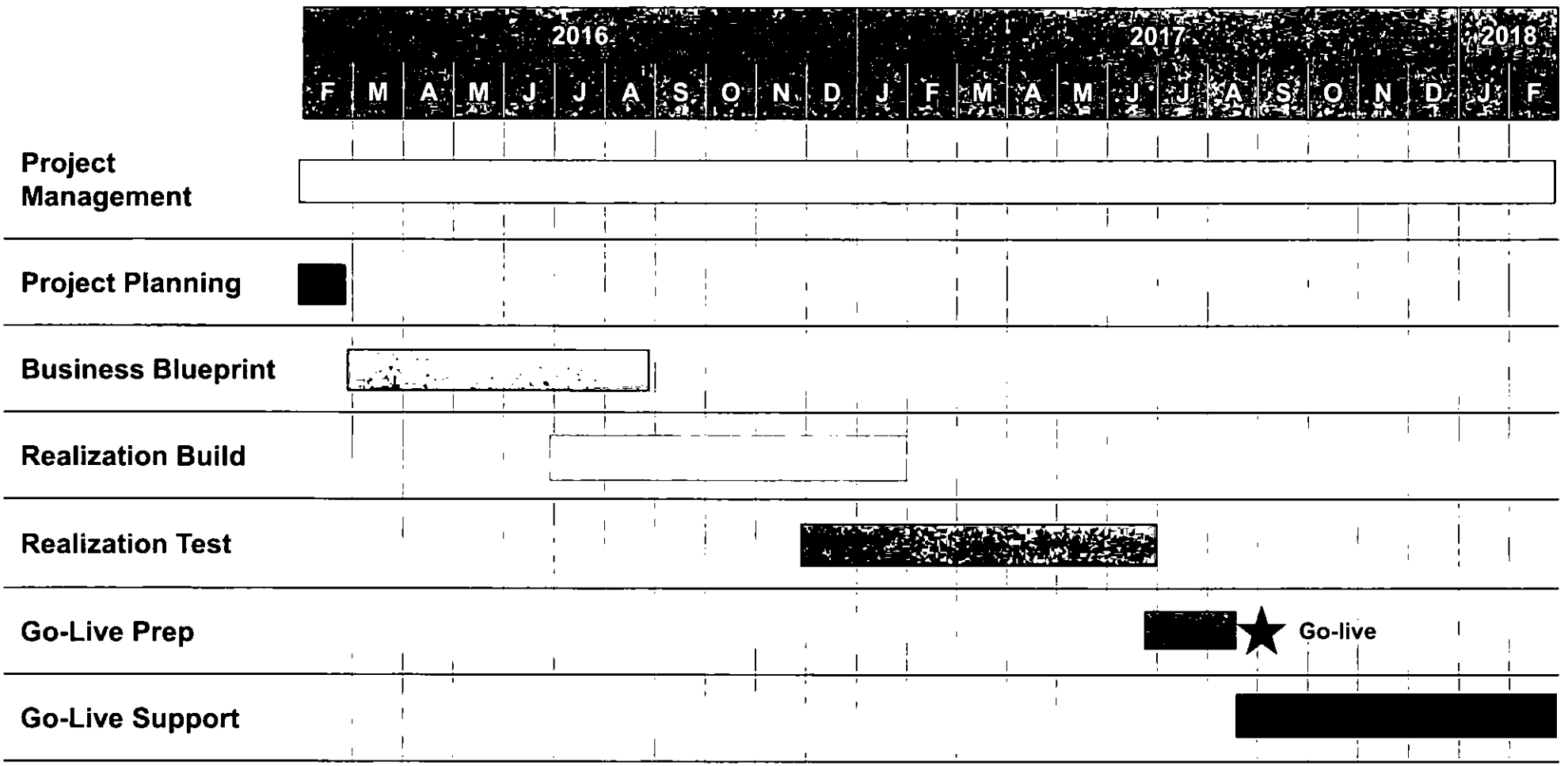
B.Sc., Computer Science (Honors), Queen Mary College, University of London

TECHNICAL SKILLS

Design, Support Techniques	STRADIS, Structured Design Methodology (SDM), Flow Charting, ITIL v3 Certified
Databases	SQLServer, Oracle, Informix, Reliance, Sybase
Hardware	various, including; Hewlett Packard 9000 series, NetFrame, IBM Compatible PCs, Sun Microsystems, Tektronix workstations, Bay Networks (Nortel) LAN/WAN equipment, Cisco Systems LAN/WAN equipment, Lucent Technologies LAN/WAN equipment, SynOptics Hub, Newbridge Routers, Wellfleet Routers
Software	various, including; Clarify, Oracle, Siebel, SAP, Remedy, Cognos, BusinessObjects, Informatica, Oracle*CASE, Oracle Discoverer, Oracle JDeveloper, Oracle 10G AS Portal, ADW, IEF, BPWin, ERWin, MS Office Suite
Languages	various, including; C, C++, COBOL, Fortran77, Lisp, Pascal, Pro*C, PL/SQL, SQL, SmallTalk
Operating Environments	UNIX (HP, Sun), MS Windows NT/2000/XP/W7, OS/32, GEORGE3, VME2900

UGI GAS EXHIBIT TNL-2

UGI UNITE Phase 1 Project Timeline



Project Kick-Off – Early-Mid February 2016 (TBD)
Blueprint – Start 2/29/16 – End 8/26/16
Realization – Start 6/27/16 – End 6/24/17
Go-Live – 9/5/2017