



**SINGLE ELECTRICITY MARKET
COMMITTEE**

**I-SEM Project Plan
Quarterly Update: July 2016**

SEM-16-048

29 July 2016

Table of Contents

1	Introduction	3
2	Project Plan - Detailed Design and Implementation	4
3	Key Update and Milestones	7
4	Stakeholder Engagement	14
5	Frequency of Updates.....	15

1 Introduction

1.1 Background

The all-island Single Electricity Market (SEM) is regulated jointly by the Commission for Energy Regulation (CER) in Dublin and the Northern Ireland Authority for Utility Regulation (or Utility Regulator) in Belfast, known as the Regulatory Authorities or RAs. The decision-making body which governs the market is the SEM Committee (SEMC)¹, consisting of the CER, the Utility Regulator as well as an independent member (who also has a deputy), with each entity having one vote.

The SEM is to undergo radical transformation arising from changes to European legislation designed to create a single wholesale electricity market across Europe. The new market design developed by the SEM Committee will result in what has been named an Integrated SEM (I-SEM) which will more fully facilitate coupling with the electricity market in the rest of Europe. Following extensive public consultation, the High Level Design for the new I-SEM was published by the RAs on 17th September 2014 (SEM-14-085a)² completing Phase I and Phase II of the Market Integration Project.

Since then, the I-SEM project has entered its final phase, Phase 3, namely the detailed design and implementation work needed to go-live with the new market anticipated for Q4 2017. Phase 3 includes various detailed design workstreams led by RAs, systems developed by the Transmission System Operators (TSOs – EirGrid and SONI) and market participant readiness testing.

The “Detailed Market Design and Implementation” phase of the I-SEM project is now well underway. The RAs and Transmission System Operators (TSOs) in Ireland (EirGrid) and Northern Ireland (SONI) and the Market Operator (SEMO) have been working collaboratively to ensure development of a robust and achievable project timeline with alignment of key workstreams, led respectively by the RAs or TSOs/MO.

1.2 Purpose of this Paper

In order to inform stakeholders of how the project is progressing, the RAs undertook to publish project updates on a quarterly basis. This is the eighth in a series of such quarterly project updates; the next will be published in October 2016.

Overall, I-SEM remains on track for go-live in Q4 2017.

The Quarterly Update provides one of a number of means by which progress is communicated to market participants and other stakeholders. Retrospective in nature, its

¹ The SEM Committee is established in Ireland and Northern Ireland by virtue of section 8A of the Electricity Regulation Act 1999 and Article 6 (1) of the Electricity (Single Wholesale Market) (Northern Ireland) Order 2007 respectively. The SEM Committee is a Committee of both CER and NIAUR (together the Regulatory Authorities) that, on behalf of the Regulatory Authorities, takes any decision as to the exercise of a relevant function of CER or NIAUR in relation to an SEM matter.

² <http://www.allislandproject.org/GetAttachment.aspx?id=85dd208f-cc91-4e35-9b58-021cb9b7b162>

focus is on achievements over the previous three months, as well as providing a snapshot of progress at the end of each quarter.

For the latest status of progress against plan, please refer to the SEMO website: [here](#), where the status shown in Figure 1 is updated and presented on a weekly basis. Also available under the I-SEM Tab on the SEMO website, is an accompanying document which provides a description of each milestone and its baseline date. Further, the website reports details of any slippage against milestone dates in the baseline plan, together with an explanation of the impact and mitigating actions being taken to preserve the go-live date(s).

Market Participants are also reminded that all are welcome at the Project Managers Group, which meets regularly to discuss progress against the baselined Level 2 Plan, to manage risks and issues, and to consider the impacts of proposed changes to milestones.

Further, stakeholders are advised that detailed market readiness reporting will commence in September 2016. Against a defined set of metrics for each market, this will provide periodic reporting of readiness to live operation of each market. It will provide the primary means by which stakeholders will be able to track and understand the current state of readiness, and the risks which are being managed to ensure that the markets and all those intending to participate in them are ready by the scheduled go-live date. This readiness reporting will also provide an important input into the go-live decision making process.

2 Project Plan - Detailed Design and Implementation

The RAs and TSOs each maintain detailed project plans of their own for the design and implementation of the I-SEM. They have come together to combine the key milestones from their respective plans into an integrated Project Milestone Plan – the ‘Level 2 Plan’.

All of the Milestones on the Level 2 Plan are included as they affect more than just a single party – that is, they impact on two or more parties (TSO, RA, Interconnector Owners, market participants, RDPs, etc.). Hence, it is important that those milestones are understood and progress against them is shared on a regular basis.

The Level 2 Plan tracks progress against a baselined set of Project Milestones, which have been selected to show the key steps on the journey to market readiness. Any slippage against dates in the baseline plan are reported on the weekly updates, together with an explanation of the impact and mitigating actions being taken to preserve the go-live date. Changes to existing milestones or the addition of new milestones can only be made via a Change Request, each of which is shared with members of the Project Managers Group for their consideration and impact assessment, prior to being approved.

An explanatory paper is published on the SEMO website, describing each of the Milestones. A small subset of the more significant Level 2 Plan Milestones is presented in the Level 1 Plan, which provides a high-level summary of the key steps to I-SEM go-live.

A snapshot of the Level 2 Plan at the date of publication is shown in Figure 1, below. Each Milestone detailed in Figure 1 is colour-coded, to show whether it has been:

- Completed (blue);
- On track (green);
- At risk (amber);
- Is late or is expected to be later than the date in the baseline Level 2 Plan (red); or
- Is newly proposed and subject to a change request (grey).

In the case of red milestones, the later expected completion date is shown in red font.

As is detailed in Section 3 of this update, good progress has been made over the last quarter, with all key Milestones having been delivered and the majority to schedule.

Indeed, since the previous Quarterly Update in April 2016, the market design has developed considerably such that a number of milestones³ on the journey to go-live which were previously coloured as amber ('at risk') are now shown as being green ('on track').

Although the CRM3 Decision was successfully published on time (8 July 2016), the subsequent CRM milestones are shown as being 'at risk', whilst a further assessment is made of the achievability of current plans to get to the first auction.

In this context, we note that there is a significant amount of work required to be ready for that first auction and the time window available is limited. This is reflected in the challenge of delivering the central market system designs and interface specifications in September 2016 and with concerns raised by participants that proposals⁴ to move this date to December would have a significant impact. As such, in conjunction with the vendor, work has been re-prioritised to allow the CRM interface specifications to be published in October 2016.

In addition, we note that a consultation is planned on local security of supply constraints, introducing further challenges to the schedule, which will need to be impact assessed.

Hence, for now, it is felt prudent⁵ to leave the CRM milestones at amber⁵.

³ Milestones 7, 8, 9, 10, 11, 76, 82, 85, 87 and 150 refer.

⁴ Change Request CR78 refers (Release 4 of the I-SEM Technical Specification)

⁵ Milestones 31, 32, 33, 34, and 35 refer.

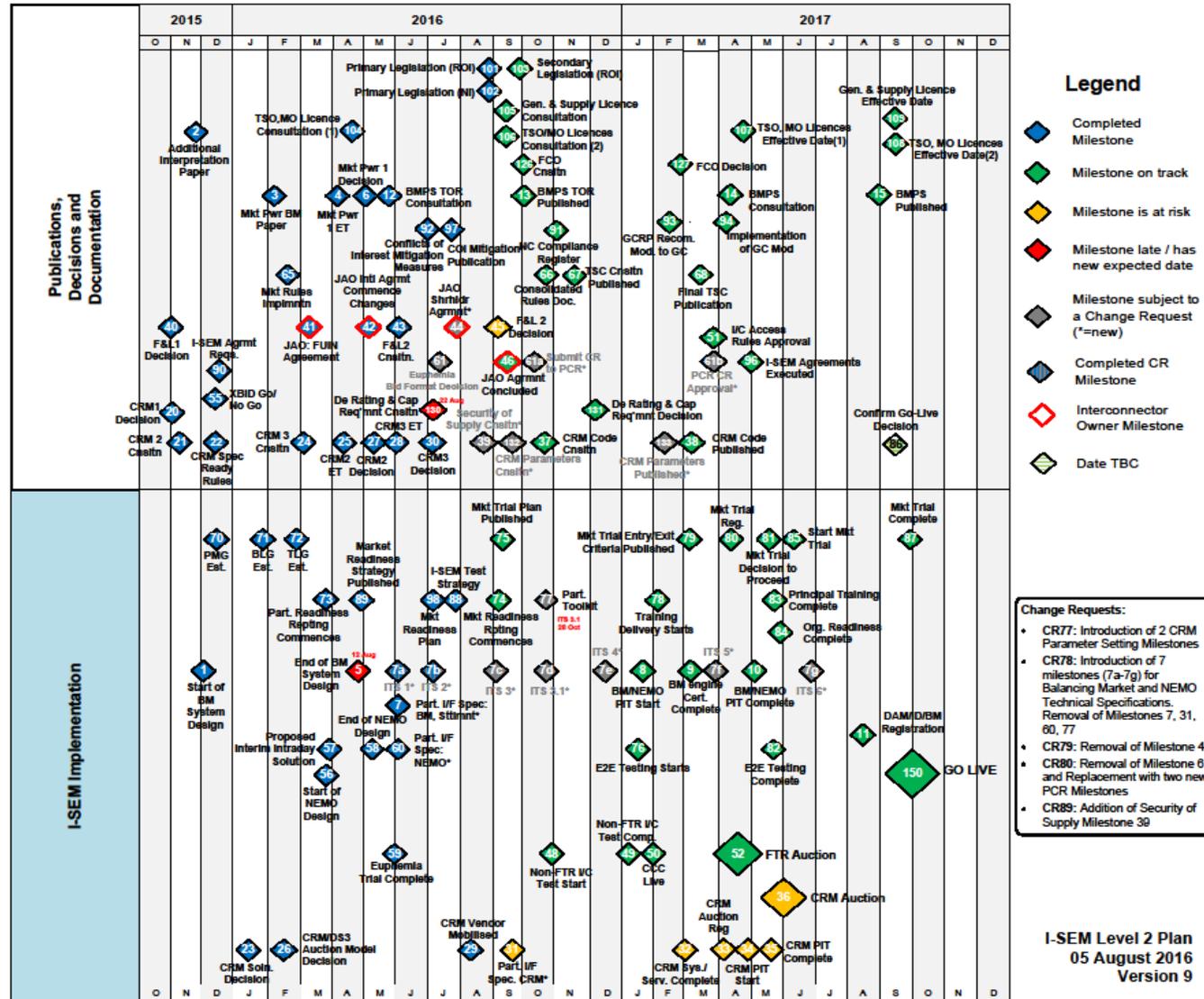


Figure 1 – Level 2 Milestone Plan for Phase 3 ‘Detailed Design’

3 Key Update and Milestones

Since the last I-SEM Quarterly Update was published on 28 April 2016, the RAs have continued to work with the TSOs to ensure that the project is progressing to schedule and that key stakeholders are afforded opportunity to engage regarding the I-SEM project – most notably via the Project Managers Group, Business Liaison Group, Technical Liaison Group and Rules Working Group. The RAs have also continued to engage with the Department of Communications, Climate Action & Environment (DCCA) in Ireland and the Department for the Economy (DfE) in Northern Ireland.

In this Section we report on progress by owner (RA or TSO) against the Level 2 Milestones shown in Figure 1, above. Where those Milestones are included in the summary Level 1 view, they are marked as being ‘Level 1’; otherwise they are shown as being ‘Level 2’.

3.1 RAs’ update

Considerable progress has been achieved in the last quarter, with the market design now largely complete and a design authority established to ensure that the integrity of the design is maintained during implementation.

Key decisions published include Market Power I, Capacity Remuneration Mechanism (CRM) Decisions 2 and 3, and SEMC approval of mitigation measures to manage conflicts of interests across TSO and MO roles and responsibilities.

Key consultation papers issued include ‘Forwards & Liquidity 2’, and a consultation on the proposed terms of reference for the Balancing Market Principles Statement.

In addition, primary legislation has been passed in both jurisdictions, in each case somewhat earlier than the date in the baseline plan.

A stocktake of the I-SEM project, as planned, commenced in June; this is running in parallel with continued delivery of the programme and is to reaffirm both the programme delivery and overall design, considering RA, TSO and Market Participant aspects. This is being aided by ESP Consulting who have been appointed as the Design Authority for the Project and as holistic Project Management for I-SEM which includes, Energy Trading, Capacity Remuneration and DS3 System Services. The outcome of this is expected to be discussed at both the September and October SEMC meetings. For clarification purposes this is being carried out in parallel with continued delivery of the current programme.

In the tables below, progress is reported in a little more detail against the RA owned Milestones, categorised by area of activity. In each case, a commentary is provided on progress together with a list of those Milestones achieved in the last quarter and those scheduled for delivery in the next quarter. Any Milestones due in the quarter but not achieved are also noted and discussed. For a description of each Milestone and its latest status, please see the I-SEM section of the SEMO website.

1. MARKET DESIGN		
<i>Market Design encompasses Energy Trading Arrangements, Capacity Remuneration Mechanism, Market Power, and Forwards & Liquidity (F&L)</i>		
	Milestones	Commentary
Completed Last Quarter (to 31 July 16)	<p>#6, Market Power 1 Decision Paper</p> <p>#12, Consultation on Balancing Market Principles Terms of Reference</p> <p>#27, CRM Decision 2</p> <p>#28, CRM Decision 3 Emerging Thinking</p> <p>#30, CRM Decision 3 'Auction Rules'</p> <p>#43, F&L 2 (CFD) Consultation</p> <p>#61, Euphemia Bid Format decision</p>	<p>Good progress; all Market Design Milestones due in the quarter were completed, with the only exception being the consultation on the 'Derating and Capacity Requirement Methodology' (Milestone #130, baseline date 7 July), which is now expected to be published on 22 August 2016.</p> <p>Milestone #61 'Euphemia Bid Format Decision' was due on 11 July 2016; however, this is subject to a Change Request currently being processed to remove the current milestone and replace it with two new milestones (Euphemia PCR Change Request on 7 October 2016 and a PCR Response milestone on 31 March 2017).</p>
To be Completed Next Quarter (to 31 October 2016)	<p>#130, De-rating & Capacity Consultation</p> <p>#45, Forwards & Liquidity (CFD) 2 Decision Paper</p> <p>#13, Decision on Balancing Market Principles Terms of Reference</p> <p>#126, Detailed Forward Contracting Obligation (FCO) Technical Operation Rules Consultation Published</p> <p>#37, Capacity Market Code Consultation Paper Published</p>	<p>The Forwards and Liquidity (CFD) 2 Decision Paper has been published and the Consultation Paper on the Forward Contracting Obligations is in progress.</p> <p>The De-rating and Capacity Consultation will slip to the end of August which may have an impact on the publication of the Capacity Market Consultation.</p> <p>Any changes of dates will be communicated via the PMG.</p>

2. GOVERNANCE & LICENCING		
<i>Governance & Licencing covers The I-SEM Project and the European Regulations that underpin the market (i.e. the CACM Gconcernuidelines)</i>		
	Milestones Completed	Commentary
Completed Last Quarter (to 31 July 16)	<p>#92, Conflict of Interest mitigation measures</p> <p>#101, Primary Legislation in Force (ROI)</p> <p>#102, Primary Legislation in Force (NI)</p>	<p>Since the last report, the Governance & Licencing team have continued to progress a number of governance review initiatives through workshops, bilateral meetings, and detailed discussions on changes to licences.</p> <p>They have also worked with the respective governments to ensure the successful enactment of the necessary primary legislation in both Ireland and Northern Ireland.</p>
To be Completed Next Quarter (to 31 October 2016)	<p>#103, Secondary Legislation in Force (ROI)</p> <p>#105, Consultation on Changes to Generation & Supply Licences</p> <p>#106, TSO and MO Licence Changes (Second Tranche) consultation published</p>	<p>In the next quarter, this workstream will be focusing on the Licence Changes for all parties so that all participants will have early sight of these in advance of the auctions.</p>

3.2 TSOs' Update

Significant progress against a range of implementation activities has continued through the last quarter. Work has spanned a broad range of activities including:

- finalising system requirements;
- developing system designs;
- publication of participant interface technical specifications;
- commencing system build activities;
- completing a highly successful trial of Euphemia;
- publication of a test strategy; and
- publication of a market readiness plan.

In addition, a significant body of work continues within the TSOs towards operational readiness of the business to perform their system operation and market operation duties under I-SEM.

Development of the Trading & Settlement Code (rules) has continued apace; all component parts of the draft TSC have now been prepared and discussed at the Rules Working Group, such that we remain on track for bringing together a consolidated set of rules in the coming quarter. With the publication of the CRM3 decision, an initial plain English draft of the Capacity Market Code has also been prepared and shared with the Rules Working Group.

Participant engagement continues to progress, notably via the Project Managers Group, Business Liaison Group, Technical Liaison Group and the Rules Working Group. Building on the Market Readiness Strategy document published in April, the TSOs published a Market Readiness Reporting Plan in July and from September they will begin periodic reporting of the state of readiness in accordance with that plan.

A substantive programme of work on specifying, designing and delivering the central market systems across a range of vendors and service providers is progressing well on all fronts. The design of the balancing market systems will now be closed-out in early August; the design has been largely complete for some time, but a few elements have taken longer to close-out than had been anticipated (notably the internal interfaces) – in part to allow the balancing market participant interface specifications to be released over the last quarter. The TSOs have been working with their vendor to ensure that this slippage does not impact on the critical path. As such, build activities successfully commenced in the quarter and build/test plans have been re-worked to accommodate those later designs.

The NEMO system design was also completed during the last quarter and work has commenced on the CRM system design.

The tables below report progress against the TSO owned Milestones, categorised by area of activity. In each case, a commentary is provided on progress together with a list of those Milestones achieved in the last quarter and those scheduled for delivery in the next quarter. Any Milestones due in the quarter but not achieved are also noted and discussed.

As before, for Milestone descriptions, please see the I-SEM section of the SEMO website.

3. MARKET RULES		
<i>The development of the Trading & Settlement Code plus associated Agreed Procedures, the Capacity Market Code, and the NEMO Code</i>		
	Milestones Completed	Commentary
Completed Last Quarter (to 31 July 16)		<p>The long march continues, with meeting 9 of the Rules Working Group having recently completed on 27th and 28th July. Excellent progress continues in the development of the market rules. Although no specific ‘Level 2’ Milestones were due in the last quarter, a significant volume of documentation has been developed, shared and discussed with the Rules Working Group. As of the end of July 2016, drafts of all sections of the Trading & Settlement Code have been completed and shared; a consolidated draft is being compiled.</p> <p>As well as reviewing Trading & Settlement Code draft content, at its July meeting, the Rules Working Group discussed an initial ‘plain English’ draft of the Capacity Market Code.</p> <p>Market Rules Working Group material may be located using the following link: http://www.semo.com/ISEM/Pages/Publications.aspx?documentarchivestatus=Active</p> <p>Drafting of the NEMO Rules has also commenced, based upon the EPEX Rules and with reference to those of HUPX. An engagement process for sharing draft rules with industry was outlined at the Business Liaison Group (BLG).</p>
To be Completed Next Quarter (to 31 October 2016)	<p>#36, Consolidated Rules Document</p> <p>#37, Capacity Market Code consultation published</p>	<p>Next quarter will see the consolidation of the Trading & Settlement Code (26 October), ready for consultation on 11 November. The Capacity Market Code will also be rapidly developed and shared with the Rules Working Group via a series of meetings.</p> <p>Work on the Agreed Procedures will take priority during the quarter.</p> <p>Drafts of the General NEMO Rules (August) and Day-Ahead Market Rules (October) are scheduled to be presented to the BLG in the next quarter.</p>

4. CENTRAL MARKET SYSTEMS & SERVICES		
<i>The development of the necessary central market systems by the TSOs and the procurement of services (e.g. NEMO)</i>		
	Milestones Completed	Commentary
Completed Last Quarter (to 31 July 16)	<p>#7a, I-SEM Technical Specification Release 1 (Volume C - Balancing Market)</p> <p>#7b, I-SEM Technical Specification Release 2 (Volumes A, B, C, D & G) – BM / NEMO</p> <p>#29, CRM vendor mobilised</p> <p>#42, JAO – Initial Agreement to change platform</p> <p>#58, End of NEMO service design</p> <p>#60, Participant Interface Specification for NEMO (<i>delivered as part of Milestone 7b</i>)</p> <p>#88, I-SEM Test Strategy</p>	<p>With regard to the Balancing Market systems, the focus has been on closing-out the design and in finalising the necessary plans and preparations for the build and test phases, which follow. System build successfully commenced, despite some elements of the design not now planned to be closed-out until early August.</p> <p>A priority in the last quarter was to ensure the timely publication of the I-SEM Technical Specifications (participant interface specifications), with two releases of the document having been released in the quarter detailing the interfaces for the Balancing Market and NEMO systems. Currently, subject to a Change Request (CR78), further specifications will be provided in subsequent releases of the document.</p> <p>The NEMO design was completed in the last quarter.</p> <p>The I-SEM Test Strategy has been published. Based on the comprehensive V-Model approach, it ensures that the delivery of all application requirements are adequately covered by test scenarios and conditions, with the added benefit that there are no redundant test conditions that do not relate to a user requirement.</p>
To be Completed Next Quarter (to 31 October 2016)	<p>#5, End of Balancing Market System Design</p> <p>#7c, I-SEM Technical Specification Release 3</p> <p>#7d, I-SEM Technical Specification Release 3.1</p>	<p>The build phase continues for the Balancing Market systems, with the first drop of code for testing due in October.</p> <p>Implementation of the NEMO will be in full swing and the participant interface toolkit will be provided in late October as part of Release 3.1 of the I-SEM Technical Specifications.</p> <p>Publication of the CRM3 Decision allows the design of the CRM systems to be completed; CRM participant interface specifications are now also planned to be released by the end of the quarter.</p>

5. PARTICIPANT ENGAGEMENT		
<i>I-SEM communication and other engagement with Participants to ensure understanding, provide the necessary training/trialling, and report readiness</i>		
	Milestones Completed	Commentary
Completed Last Quarter (to 31 July 16)	<p>#59, Euphemia Trial completed</p> <p>#98, Market Readiness Reporting Plan published</p>	<p>The Euphemia Trial concluded during the last quarter, with the submission of a final report summarising the outcomes of the Trial and presenting a recommendation on the bid formats. Acclaimed as being highly successful, the objective of the I-SEM trialling of EUPHEMIA was to explore the use of order types to create SEM representative market orders and to assist in developing understanding of the EUPHEMIA algorithm.</p> <p>The participant liaison groups have continued to meet regularly, providing valuable opportunity for information exchange and dialogue, plus issue resolution.</p> <p>The Market Readiness Reporting Plan was published in July, detailing how the TSOs will provide on a periodic basis an overall picture of progress towards readiness for operation of I-SEM against an agreed set of metrics. The process encompasses all of the markets within I-SEM, and the categories of Participants that have roles in each market. Building on the “Market Readiness Reporting Strategy”, which described the overall approach to market readiness reporting and main features of the process, this document describes how the approach described in the strategy will be put into practice.</p>
To be Completed Next Quarter (to 31 October 2016)	<p>#74, Market Readiness Reporting commences</p> <p>#75, Market Trial Plan published</p>	<p>In the next quarter, market readiness reporting will commence with the first report due in early September.</p> <p>The Market Trial Plan is also due to be published, providing details of the planned ‘as-real’ operational trial of I-SEM systems, processes and people in preparation for go-live.</p>

4 Stakeholder Engagement

5.1 Upcoming milestones and engagement

Notification of other events regarding the I-SEM Project will be updated by the RAs on the SEM Committee website and by the TSOs on the I-SEM page of the SEMO website.

An events calendar can be access via:

[All I-SEM Events](#)

5 Frequency of Updates

6.1 Updates

The RAs have committed to publishing an update to the I-SEM Phase 3 Project Plan on a quarterly basis. Hence the next Project Plan will be published by the RAs on the AIP website at the end of November 2016.

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