In the loop
Update
PolyStyreneLoop
December 2017

Trust is what made our project successful!
Therefore we like to thank members and supporters of PolyStyreneLoop, including the new staff hired this year, for all this trust and enthusiasm given to our Circular Economy project. For the demo plant we all can confirm that 2017 has been a great year with the highlight being the inauguration in Amsterdam. Nearly all objectives set for 2017 were met, thanks to an enthusiastic team and broad support within the polystyrene value chain. We are looking forward to continue our success in 2018.

For a fresh and bright 2018 the PolyStyreneLoop team wishes you

MERRY Christmas & HAPPY NEW YEAR

PolyStyreneLoop Cooperative U.A.
Zeedijk 25
NL-4871 NM ETLEN-LEUR

info@polystyreneloop.eu
www.polystyreneloop.eu

PolyStyreneLoop B.V.
Frankrijkweg 10
NL-4538 BJ TERNEUZEN
Update

As the world’s most innovative recycling project for polystyrene containing HBCD, PolyStyreneLoop is a pioneer in the Circular Economy. What makes it so innovative is not only its ground-breaking technology but also its novel business model. The PolyStyreneLoop BV enterprise is governed by the PolyStyreneLoop Cooperative, which has almost 60 members and supporters in the European polystyrene value chain including flame retardants producers and recyclers.

In November 2017, the first Inauguration Meeting and General Assembly of the PolyStyreneLoop Cooperatief took place in Amsterdam. The Inauguration Meeting (for members and supporters) was kicked-off by Lein Tange and Jan Noordegraaf, Directors of PolyStyreneLoop, wearing the traditional costume of the Dutch East India Company (VOC). Like the VOC, PolyStyreneLoop is based on a vision of working together for a common goal. For PolyStyreneLoop this goal is the upcycling of polystyrene (PS), the destruction of HBCD and the recovery of bromine. In this respect, the PolyStyreneLoop is an uncommon, but ideal multi-national cooperation that will kick start the golden age of polystyrene.

During the General Assembly over 80 members, supporters and stakeholders witnessed an inspiring keynote speech on the PolyStyreneLoop project and its importance in the Circular Economy by Mr. Paolo Sandri, Policy Officer of DG GROW (Internal Market, Industry and Entrepreneurship). He stated that the PolyStyreneLoop is an essential contribution to the EU efforts to develop a sustainable, low carbon, resource efficient economy. The PolyStyreneLoop project ticks all boxes of the Circular Economy. Mr. Cees Luttikhuizen from the Dutch Ministry of Infrastructure and Water Management gave a policy perspective on HBCD, and Mr. Tomasz Piec, representative of the PolyStyreneLoop Cooperatief and Vice President of Synthos Group motivated the industry to further support this initiative.

Other presentations included
- a view on the Plastics Strategy for the styrenics value chain, presented by Christian Block (Plastics Europe),
- information about the CreaSolv® Process (Dr. Gerald Altnau, CreaCycle GmbH) and the technology behind it (Karol Kerrane, Christian Klaus from EPC Engineering and Technologies)
- a summary of the study on amounts of EPS and XPS waste in Germany (Mr. Schlotter, BKV)
- an update on the Life Cycle Assessment of ETICS End of Life Treatment of EPS by Nicole Kambeck (BASF).

All presentations can be downloaded via the PolystyreneLoop website www.polystyreneloop.eu.
Update

After we signed the agreement with the European Union for a LIFE Grant in May, the PolyStyreneLoop project officially started on 1st July 2017. The first milestone was purchasing a plot of land next to ICL in Terneuzen, the Netherlands, thus linking the PSLoop plant to ICL’s existing chemicals bromine recovery complex. We made a lot of progress preparing contracts, term sheets and the statutes of the PolyStyreneLoop Cooperative. Together with the full administration for the PolyStyreneLoop Cooperative and the PolyStyreneLoop BV enterprise we hope to have everything finalised by the end of this year. Furthermore, the PolyStyreneLoop BV enterprise has hired key staff: Toine Janssen as Plant Manager, Jan van Dijk for Project Management and LIFE Grant Reporting, and Alix Reichenecker as Planning & Working Group Secretary. Alan Moss (Financial Director), Nicolette Mulder (Administration, Communication & Coordination) and Serkan Yildirim (LIFE Grant Specialist & Financial Administration) will support PolyStyreneLoop BV enterprise with their respective expertise.

Calendar

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-01-17</td>
<td>Netherlands Circular HotSpot, Rotterdam</td>
</tr>
<tr>
<td>2018-02-22/23</td>
<td>European Industry Day</td>
</tr>
<tr>
<td>2018-04-18/19</td>
<td>Polymers in Building Insulation, Cologne</td>
</tr>
<tr>
<td>2018-04-24</td>
<td>Plastic Recycling Show Europe, Amsterdam</td>
</tr>
</tbody>
</table>

Communication

The PolyStyreneLoop website (www.polystyreneloop.eu) was updated, and notice boards, banners and brochures were developed for dissemination. Especially after the kick-off meetings in Amsterdam, the project has received massive media attention through press releases and several news items.

Project Management and Life Grant

Within the PolyStyreneLoop project Jan van Dijk co-ordinates the reporting related to the Life Grant. He is also strongly involved in the development and organization of the (inter)national waste collection and transport. Jan has a background in waste management and technology in general and a niche expertise in recycling of EPS. He is head of the waste management section of the Dutch Association of Environmental Professionals (VVM) and owner of Giraf Results, a company in consultancy and project management.

A first review of the Life Grant project was executed on December 6 by NEEMO EEIG. NEEMO is responsible for monitoring LIFE projects on behalf of the EU Commission. During the day we received great support and advice. The end conclusion was that most of our activities are on schedule. The first intermediate reporting has been delivered in December.
Plant Management

Toine Janssen, introduced to you in our previous Newsletter, is responsible for Plant Management. Toine will be involved in the organisational structure and the construction of the PS Loop Plant. His experience with processing processes and cost-effective manufacturing will without doubt contribute to the success of this demonstration plant.

Technical Working Groups

In May 2017 we established several Working Groups, that will focus on the different aspects of the project: Engineering, Permits and Collection / Pre-Treatment. Alix Reichenecker is responsible for coordination of Planning and Working Groups. Many wheels have been set in motion to be able to start the plant construction in the second half of 2018.

Engineering

The engineering work on the construction of the plant will start in due time: legal contracts and Intellectual Property are taken care of and contracts are scheduled to be signed before Christmas.

Permits

In October we tendered the permit work inviting three major consultancy groups to quote. The work was granted to SPA-WNP, an consultancy firm well know in the world of industrial permits. In the meantime, the first permit draft has been forwarded to Teneuzen authorities.

Collection and pre-treatment

Collection of EPS waste has started! We have received the first 15 tons of compacted EPS waste by De Vries Recycling in Urk (NL). The waste is being stored at a temporary storage facility and we are ready to receive more. The raw material price target that was set for the business case was also met.

The preparations for the first meetings of the working group are also in full swing. Members of the working group meet in Germany and in The Netherlands in the first quarter of 2018.
The team at EPC GROUP extends seasonal greetings to one and all! We were proud to attend the PolystyreneLoop signing ceremony in Amsterdam in November. It was the result of vision and commitment and a team effort during the past few years. We look forward to working together in the new year and we wish everybody continued success, happiness and health in 2018 and beyond.

Karol Kerrane – Business Development Director – EPC GROUP