**IE expo China 2017 Innovation Forum/ TAG China:**

***The most cutting edge water technologies for the advancement of environmental protection in China***

**Hosted by Isle Utilities**

**IE Expo China, Shanghai**

**Session 1: Thursday May 4th | 14:00-15:30**

**Location: Innovation Forum in the Innovation Pavilion**

***Chairman:*** *Annelies Schenk – Director Isle Utilities*

***Jury:***

* *Gijsbert de Bruin- CEO CHC Group*
* *Tbd*
* *Tbd*

**Agenda**

**14:00    Introduction by Isle Utilities Annelies Schenk**

**14:05 Kick off by Launch Factory 88 Gijbert de Bruin**

The roadmap of investing in innovative environmental technologies that want to gain a competitive advantage in the Chinese market.

**14:15 Hydro-dis    Mark Carey**

The Hydro-dis® system is a proven unique water disinfection technique that uses the electrocatalytic break down of water to instantly destroy waterborne micro-organisms including micro-flora, while simultaneously converting chloride ions into chlorine leaving a measured residual disinfection in the treated water. This secondary disinfection ensuring sustained microbiological control. The Hydro-dis® system replaces traditional disinfection techniques such as chemical dosing (Sodium Hypochlorite and Chlorine Gas), Ultra Violet irradiation and Ozonisation with a cost effective, environmentally friendly, modular and portable system. The Hydro-dis® process has achieved certification to the Australian Standard 4020 which certifies any product used in contact with drinking water in Australia.

The unique Hydro-dis® process significantly improves the efficiency of Iron and Manganese removal from source water when compared to traditional techniques using the same filter equipment. The unique Hydro-dis® process of oxidation improves Iron removal from 75% to 100% and Manganese from 35% to 65%. The proven technology is now being used in applications ranging from drinking water, through to wastewater and any application in between. The Hydro-dis® technology removes the need to transport and store hazardous chemicals around the country.

Hydro-dis®系统是一种独特的水消毒技术，其使用电催化分解水从而快速破坏水中微生物，包括微生物群落，同时将氯离子转化为氯留在水中成为二次消毒剂以此控制微生物的再生。Hydro-dis®系统凭借其低成本、环保、模块化和便携的系统等优势取代了传统的消毒技术，如化学计量（次氯酸钠和氯气），紫外线照射和臭氧化消毒。Hydro-dis®系统已经获得澳大利亚标准4020的认证，该项认证说明Hydro-dis处理过程可直接与饮用水接触。

与使用相同过滤设备的传统技术相比，独特的Hydro-dis®工艺显着提高了从水中除去铁和锰的效率。其中铁元素的去除效率从75%提升至100%，锰元素去除效率由35%提升至65%。

从饮用水净化到废水处理，这项改进升级的技术现在可应用于各种用水领域中。Hydro-dis®技术消除了在全国运输和存储危险化学品的需要。

**14:30   New Sky Energy Deane Little**

New Sky’sSulfurCycle-R Process- Bio-methane is a valuable renewable resource produced by the municipal wastewater, landfill and agricultural waste industries. Most biogas streams are contaminated with hydrogen sulphide (H2S), a deadly, foul-smelling gas that must be removed before biogas is sold or combusted as fuel. Conventional methods of H2S treatment are costly single use chemistries that consume resources and generate significant waste. These high treatment costs make many biogas projects uneconomical.

New Sky’s SulfurCycle-R (SCR) process is a breakthrough gas sweetening technology that dramatically lowers the cost of H2S treatment, providing wastewater plants and landfills strong economic incentives to pursue renewable natural gas projects. SulfurCycle uses an inexpensive, non-toxic H2S capture media that can be regenerated onsite simply by blowing air through the spent media. The resulting products are H2S-free bio-methane, a low carbon renewable fuel, and elemental sulphur, a valuable organic soil amendment. New Sky’s H2S capture media lasts 15-20 times longer than conventional single-use H2S scavengers like ferric chloride, dramatically reducing operating costs and making biogas projects more profitable.

New sky 硫循环-R 工艺（SCR）

生物甲烷是一种有价值的可再生能源，通常由工业废水，生活垃圾和农业废物生产得到。但是生产甲烷的过程也产生有毒、有臭味的硫化氢（H2S）气体混于沼气池中，因此在被当做燃料销售和使用前必须从沼气中祛除硫化氢。常规的脱硫方法使用的化学药品的生产过程不仅消耗大量的能源而且显著的废物，使得许多甲烷生产项目经济性较差。

New sky 的SCR工艺是一项突破性的脱硫技术，大大降低了H2S处理成本，给污水处理厂和垃圾填埋站有力的经济激励，以寻求可再生天然气项目。SCR工艺使用廉价、无毒的H2S捕获介质，只需往使用过的介质里通入空气便可循环利用。所得产物是不含H2S的生物甲烷，低碳可再生燃料和有机土壤改良剂元素硫。New sky的H2S捕获介质比常规一次性H2S清除剂（如氯化铁）持续时间长15—20倍，大大降低了运营成本，使沼气项目更有利可图。

**14:45 Arvia Mike Lodge**

**Arvia™** offers a unique and cost effective treatment process for the destruction of aqueous toxic organic contaminants to the water sector and industries. It achieves this with its patented innovative technology, the Organics Destruction Cell ([ODCTM](http://bit.ly/1QMAc5A)). In terms of application, the ODC provides targeted removal of organics to: (1)safely discharge wastewater to the environment;(2)enable water to be reused; (3)preferentially remove contaminants of concern;(4)meet regulatory targets for Chemical Oxygen Demand (COD) and micro-pollutants including pesticides and pharmaceutical residues. Arvia’s ODC combines adsorption with advanced oxidation in a single, scalable unit. Contaminants are concentrated on the surface of Arvia’s patented regenerating adsorbent, Nyex, which allows for targeted and continuous oxidation.TheNyex media is effectively regenerated in-situ and the process can continuewithout interruption or replacement.

**Arvia™**通过其创新专利技术——有机物细胞破坏法([ODCTM](http://bit.ly/1QMAc5A))——为水行业和工业提供了一个独特和经济的消除水性毒性有机污染物的方法。在应用方面，ODC有针对性地去除有机物从而：（1）实现将废水安全地排放到环境中；（2）使得水可以再利用；（3）优先清除有害物质；（4）满足化学需氧量（COD）和微量污染物（包括农药和药物残留物）的监管目标。Arvia的ODC工艺将吸附和先进的氧化两项功能结合于一个独立，可拓展的部件里。污染物将集中吸附在再吸附剂Nyex（Arvia的专利）的表面上，而Nyex允许目标性地，连续性地氧化发生。最后，Nyex介质会被有效地原位再生，从而吸附氧化过程可以连续不中断地进行。

**15:00 Reali Technologies Ltd Ran Kedem**

Reali Technologies is an Israeli leader and one of the world pioneer companies in IOT (Internet of Things) since 2007. It provides cloud-based real time operational & managerial solutions, named RealiteQ, for water, waste water, energy, agriculture & industry since 2009. RealiteQ is a web based (Cloud ) SCADA solution which was developed as end-to-end (Full RDM - Telemetry, UI/HMI software & Service) Information and Communication Technology (ICT) that gathers and controls critical and operational data, in real time from sensors, analyzers and controllers/PLC.

RealiteQ IOW technology is a true Smart Water Network (SWAN) technology which is a part of the smart city concept. The technology consists of site module (Gateway), communication, server, historical server, real-time User Interface (UI), alarm handling and report generator, allowing serial, Ethernet or I/O interfaces to connect the control system. Real-time communication, Bi directional communication, supports standard protocols, such as Modbus serial RTU, Modbus TCP, Allen Bradley serial DF1 and so on. The simplicity of the installation and use, as well as its reasonable cost (CAPEX & OPEX) makes RealiteQ affordable & available for all utilities. Today, Reali Technologies has an advanced proven system with thousands of installations in 5 continents.

Reali科技自2007年以来一直是以色列领先的IOT（物联网）企业之一。自2009年以来，它为生活用水，废水，能源，农业和工业等领域提供了基于云的实时操作和管理的解决方案，即RealitQ。RealitQ是一个基于云SCADA的解决方案，开发作为端对端的信息通信技术可以实时收集和控制关键数据并操作数据传感器，分析仪和控制器的时间。

RealitQ技术是真正的智能水网技术，是智能城市概念的一部分。该技术包括站点模块，通信，服务器，历史服务器，实时用户界面，报警处理和报告生成器，它允许窜行，以太网或I/O接口连接控制系统。其实时通信，双向通信支持modbus窜口RTU，TCP和Allen Bradley窜行DF1等标准协议。安装和使用的简便性以及合理的成本使得RealitQ可承受并可用于所有设备中。目前，RealitQ已发展成为一个先进成熟的系统，在世界各地都有其安装应用。

**15:15    Closing     Isle Utilities**