

Identify competitive advantages and disadvantages of seawater desalination industry in China using the diamond model

Xiang Zheng^a, Songqin Tan^a, Rong Cheng^a, Zhenxing Zhang^{b,*}, Lei Shi^{a,*}

^a*School of Environment and Natural Resources, Renmin University of China, Beijing 100872, China, emails: shil@ruc.edu.cn (L. Shi), zhengxiang7825@163.com (X. Zheng), 2249303597@qq.com (S.Q. Tan), chengrong@ruc.edu.cn (R. Cheng)*

^b*Illinois State Water Survey, Prairie Research Institute, University of Illinois at Urbana-Champaign, Champaign, IL 61820, USA, emails: zhang538@illinois.edu/zzx509@yahoo.com*

Received 3 January 2019; Accepted 14 July 2019

ABSTRACT

Seawater desalination, a technology that can tap new source of water and increase water supply, has been increasingly supported and incentivized with various policies and regulations in China. However, the quantitative targets set by Chinese government have never been met and seawater desalination industry (SDI) is developing slowly when compared to the rapid advancement of desalination technology. Why has the SDI been developing slowly, even with strong support and incentives by the government? In this study, a diamond model is proposed to comprehensively analyze the industrial competitive advantages and disadvantages. The results show that the SDI has already achieved certain market competitiveness in technology research and development, equipment manufacturing and engineering construction in China. According to the relative analysis results, the weak market competitiveness, disconnection of technology with the market and the shortage of the industry chain are the main factors responsible for the slow development of SDI in China.

Keywords: Seawater desalination industry; Diamond model; Competitiveness

* Corresponding authors.

This article was originally published without an Acknowledgment. This version has been corrected. Please see Corrigendum in vol. 175 (2020) 420 [10.5004/dwt.2020.25482].