How can governments in the developing world promote innovation in microenterprises, which provide the majority of employment opportunities but frequently rely on outdated, needlessly dangerous, and polluting technologies? Based on insights from the scholarship on innovation and developmental states, this paper considers how states can overcome some of the challenges inherent to collaborative planning with microenterprises. Existing analyses of microenterprises in developing economies tend to treat them as either 1) too unorganized and vulnerable to be effective partners in designing policy interventions that would suit them or 2) very effective at resisting even well-meaning regulatory efforts. These visions logically lead to very different conclusions about how governments should intervene to improve the technologies they use. In this paper I show, instead, that these are not mutually exclusive conditions but rather that they characterize the political capabilities of microenterprises at different levels of governance: largely unable to help define forward-looking policies at the national level, but effective at resisting regulations or other policies at the local level. This creates a complex situation in which public agencies must be flexible enough to tailor national initiatives to local conditions and address local market pressures as well as employ existing networks of microenterprises to gather and disseminate information. In making this argument, I draw upon field work and case studies in three comparable, highly-polluting industries dominated by low-tech microenterprises: leather tanning, brick making, and traditional ceramics production in Mexico. Each of these industries has come under regulatory pressure to alter the technologies they employ and have upgraded to varying degrees, depending upon public agencies’ abilities to engage local networks of enterprises and tailor the regulatory process to make upgrading possible. A great deal of scholarship has been dedicated to how states have promoted innovation and economic development but this work has ignored the smallest firms at the lagging edges of emerging economies. This paper responds to this gap theoretically as well as providing policy implications for the engagement of these tiny, often informal enterprises by government officials.